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THE UNIVERSITY OF ALBERTA

HISTORY OF THE ALBERTA PROVINCIAL

INSTITUTE OF TECHNOLOGY AND ART

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DIVISION OF EDUCATIONAL FOUNDATIONS

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "History of the Alberta Provincial Institute of Technology and Art" submitted by Frank Simon, B.Ed., in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT OF THESIS

This descriptive study examines the influences which led to the establishment of the Alberta Institute of Technology and Art and the ways in which the Institute has served the province and the nation. The study attempts to determine also the Institute's future role in the total field of vocational education in Alberta.

The chiefly bibliographical method of study consisted of the examination of a wide variety of primary source matter, and to a much lesser extent, a study of secondary source references. Bibliographical investigations were supported by several interviews with persons professionally involved in the field of technical education in the Province. Personal correspondence with persons occupationally involved in vocational education at the Institute, Provincial and Federal levels was another method of investigation.

Influences which led to the establishment of the Provincial Institute of Technology included the placing of both the Provincial capital in 1905 and the University of Alberta in 1908 in Edmonton, and the consequent indignation in Calgary resulting from that city's failure to share in these honors. Another, perhaps more important influence was the result of a Royal Commission's investigation in 1915 into the operation of Calgary College, a private university,

established in Calgary in 1912. Since Provincial legislation prohibited the establishment of a second university in Alberta, the Commission recommended, as a substitute for the bankrupt Calgary College, the establishment of an institute of technology and art, which was not to offer university courses. Other influences which led to the Commission's recommendation undoubtedly included the Dominion Government's entry into the field of vocational education through its appointment of the Royal Commission on Technical Education in 1910, and the Dominion's support for this type of education through the passing of the Agricultural Assistance Act in 1913.

Combined private, municipal and Provincial efforts to establish an institute of technology failed. Rid of the private influences, authorities of the City and Province continued to negotiate fruitlessly for the Institute's establishment. Not until the Dominion Government, through the Military Hospitals Commission, began its program to rehabilitate disabled soldiers early in 1916 was an agreement to establish the Institute reached.

Subsequent Dominion legislation and financial support have accounted in a large measure for the continued operation of the school.

From a humble beginning in 1916 the Institute has

grown into an educational establishment at which the current student enrolment is nearing the 10,000 mark.

Almost from its beginning the Institute's main goal has been to train the foremen and superintendents of industry. Consistent with Canada's developing technologies, the Institute has redefined its primary objective as that of training technicians and junior engineers.

The absence of a more diversified and articulated program of vocational education in Alberta has prevented the Institute from achieving its main purpose in full measure. The process of the Institute's development as a school of technology will probably be hastened by the advent of the largely Federal vocational high schools, provided that an effective policy governing their operation as vocational training institutions is established.

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CHAPTER I

THE PROBLEM

I. PURPOSE OF THE STUDY

The fundamental purpose of this study is to describe the development of the Alberta Provincial Institute of Technology and Art from the time of its inception to the summer of 1962.

Subdivisions of the purpose are as follows:

- (1) To discover and examine the influences which led to the establishment of the Institute.
- (2) To trace the ways in which the Institute has endeavored to serve the Province and the Nation.
- (3) To examine the Institute's role in the total field of vocational education in Alberta.
- (4) To describe the ways in which the Institute has provided for cultural needs of residents of Calgary and of the Province generally.
- (5) To endeavor to determine the future role of the Institute in the ever-broadening field of vocational education in Canada.

II. REASONS FOR THE STUDY

For decades after its establishment, the Institute struggled for recognition as a vital entity in the educational field. As long as Alberta remained predominantly agricultural, as long as industry had little demand for trained technicians, as long as the Institute remained

virtually unrelated to the Province's academic educational stream, there was little chance for the Institute to achieve its full potentialities. As these conditions changed, however, the school has won an established and useful place in the Province's system of postsecondary education.

Since the Institute has become an integral part of the Province's educational system, it would seem that a historical study of the school would be a useful contribution to the field of educational history in Alberta.

III. SCOPE OF THE STUDY

No major limitations were considered at the outset of this study. The purposes of the study necessitated, first of all, the writing of a comprehensive background in order to present meaningfully the influences leading to the Institute's establishment.

Next, the examination of its educational service required the tracing of the Institute's relationship to the Dominion Government, the Provincial Government, local and provincial industries, Alberta's secondary school system, the University of Alberta, and the cultural and vocational needs of men and women throughout Alberta.

The only major limitation deemed desirable after the

study was under way pertained to the Institute's staff. An effort was made, however, to include the staff insofar as it was directly concerned with the study.

IV. METHOD OF STUDY

The method of study was chiefly bibliographical; the development of composition is chiefly descriptive. Background material for Chapter II was taken chiefly from secondary-source references. Information used to describe the growth and development of the Institute was drawn mainly from primary-source matter.

Bibliographical research was supplemented by interviews, as the footnotes in Chapter IX indicate. A valuable source of information was correspondence from persons well acquainted with various functions of the Institute.

V. ORGANIZATION OF THE STUDY

It was considered desirable to arrange the topics into a chronological framework designed to divide the Institute's history into periods separated by outstanding historical events, as evident in the Table of Contents. Thus every selected period of the Institute's development is projected against the particular socio-economic background of the corresponding period.

VI. PREVIOUS RELATED STUDIES

No major studies on the Provincial Institute of Technology were found. The only study on the Institute per se was a thirteen-page term paper entitled "A History of the Provincial Institute of Technology and Art," written by Mr. C. Groves as an essay requirement at the University of Alberta, Edmonton in 1955.

Brief reference to the Institute appears in Mr. Isidore Goresky's Master's thesis, "The Beginning and Growth of the Alberta School System."¹ In his thesis Mr. Goresky terms Calgary College a "denominational school."² Nothing was found in the present study to suggest that Calgary College was a denominational institution.

A brief history of the Institute is included in a paper entitled "Discussion of the General Question of the Programme of the Institute from the Point of View of Professional Training as Against the Narrower Trade School Idea," by Dr. Carpenter at the Institute sometime during his long term as its principal. In this report Dr. Carpenter gives considerable attention to the Institute's objectives.

¹ Isidore Goresky, "The Beginning and Growth of the Alberta School System," unpublished Master's thesis, University of Alberta, Edmonton, 1944.

² Ibid., page 12.

Mr. Lindley H. Bennett, a pioneer in vocational education in Canada and for many years a member of the Institute's instructional staff, devoted two pages to the Institute in a study, "Introduction of Manual Training to Canada," which he wrote at the Institute sometime before 1939.

In her thesis "History of Education in Calgary" Phyllis Weston devotes approximately twelve pages on the Institute of Technology and Art. In her discussion of early attempts to establish the Institute, Weston seems to consider the Calgary Public School Board to have been a meddler, hampering negotiations with the Provincial Government towards the establishment of the Institute. In Weston's words:

In the meantime, the Calgary School Board, feeling itself also to be representative of educational interests in the city, made an independent move. Five weeks had passed since the first mass meeting. The members of the Board felt that the session of the Provincial Legislature might end without any concrete achievement towards higher education in Calgary. At a special meeting, held on April 12, 1915 the Board appointed a small committee to carry on negotiations with the province if the city group should fail to attain its purpose. This sub-committee went to Edmonton at the same time as the official delegation. Although the eventuality for which the former group was prepared did, in fact, take place, the Minister of Education declined to consider proposals proffered by the official group. The latter had thus served only to emphasize disunity.³

³ Phyllis Weston, "The History of Education in Calgary," unpublished Master's thesis, University of Alberta, Edmonton, 1951, page 81.

Weston states that the Board "feeling itself also to be representative of educational interests in the city, made an independent move" which took the form of separate representation to the Hon. Mr. Boyle, Minister of Education.

It was found through the present study that the Royal Commission which investigated the Calgary College problem recommended that a number of directors of the proposed Institute of Technology be appointed by the School Board,⁴ and that members of the Board were among delegates appointed at a mass meeting to a citizens' committee whose function it was to open negotiations with the Provincial Government.⁵ It was also found that the Minister of Education invited a representation from the School Board to accompany the "official" delegation.⁶ These findings seem to be at variance with Weston's contentions.

⁴ REPORT OF THE COMMISSION appointed to consider the granting of degree-conferring powers to CALGARY COLLEGE, Canada, Province of Alberta, May 22, 1914, page 3.

⁵ Ibid.

⁶ The Morning Albertan, Calgary, April 17, 1915, page 3.

CHAPTER II

THE BEGINNING AND GROWTH OF VOCATIONAL EDUCATION IN CANADA

I. INTRODUCTION

The guild system of the medieval period began to lose its effectiveness with the advent of the Industrial Revolution, and by the middle of the nineteenth century, the old apprenticeship system was breaking down. Machine production and factory organization demanded skilled tradesmen of a type that the old apprenticeship system was unable to produce.¹

In Canada, to meet the demand for workers of this type, a number of private vocational schools were opened later in the nineteenth century.

Private efforts to supply skilled workers for industry proved inadequate, however, and the first decade of the twentieth century saw the beginning of provincial and federal government participation in the field of vocational education.²

¹ Curriculum News Letter, Department of Education, Edmonton, Alberta, October, 1958, page 1.

² Report of the Royal Commission on Technical Education, King's Printer, Ottawa, 1913, Part 1, page 16.

Generally, the development of publicly supported vocational education in Canada can be said to have occurred in three stages: (1) the provision for manual training in the upper grades of the public schools below high school level, (2) the provision for a more advanced and more directly vocational education in the pre-vocational schools, agricultural schools, technical and high schools, and (3) the provision for advanced technical training at institutes of technology. The stage-by-stage development of vocational education illustrates the homogeneous nature of the combined curricula in any specific field of vocational education, and reflects the growing demands of Canada's developing industries.

II. EARLY BEGINNINGS

Vocational education in Canada dates from the early days of New France. In about 1668 a trade school founded by Laval at St. Joachim offered courses which included carpentry, gilding, tailoring, painting and sculpture. The purpose of this school was to "help young men who had no religious calling to prepare their future."³ A religious

³ Vocational Education in Canada, Department of Labour, Ottawa, 1949, page 11.

order established a somewhat similar school in Montreal in 1699 with authorization from the King of France.

For many decades following the advent of these schools, however, vocational education fell to individual craftsmen as a result of the instability of colonial life, wars, and the acquisition of French Canada by Britain.⁴

Greater efforts in support of vocational education began again in 1860 with a bequest by the seigneur of Joliette for the establishment of an industrial school there. A short time later a mechanics' institute of British origin which offered evening classes only was founded in Montreal. Similar schools were opened in Montreal by the Arts and Trades Council, incorporated in 1872. At this time Provincial authorities began to show concern for the training of young industrial workers. By 1880 there were thirteen trade schools approved by the Quebec Government.⁵ In some of these schools, however, more attention was given to fine arts than to manual arts.

A Provincial Act passed in 1897 provided grants for existing trade schools which were placed under the control of the Arts and Trades Council. No significant expansion

⁴ Ibid., page 12.

⁵ Ibid.

of technical education occurred in Quebec in the remainder of the century.⁶

In Nova Scotia, an early development in vocational education was the opening in 1884 of Provincially-sponsored evening classes for colliery workers. Truro Agricultural College was established in the following year. Manual training in the higher grades of the elementary schools was begun in Halifax in 1891, and later in Wolfville and Truro.

In Ontario vocational training made its first appearance in 1891 when the city of Toronto offered courses in science, business, art and home economics. No provision was made, however, for manual training.⁷

The first attempt at vocational education in Manitoba was the offering of a commercial course in Winnipeg in 1899. In British Columbia vocational education began with a few commercial classes in 1885.

No significant attempts to provide vocational education were made before 1900 in Prince Edward Island, New Brunswick or the North-West Territories.⁸

⁶ Ibid.

⁷ Ibid., page 13.

⁸ Ibid., pp. 8-20.

III. THE MACDONALD MANUAL TRAINING PLAN (1900-1903)

The first strong impetus to vocational education in most Canadian provinces came in 1900 from a philanthropic effort of Sir William Macdonald, a tobacco manufacturer. A resident of Montreal and a bachelor, Macdonald donated much of his wealth to education. He had already given over two million dollars to McGill University when Professor James Robertson, architect and builder of the Macdonald Manual Training Plan, induced him to spend an additional one and a half million dollars on the extension of manual training in Canadian public schools.⁹

Well acquainted with social conditions in most parts of the Dominion and with technical education of farmers, Professor Robertson became convinced that the existing system of formal education in the public schools was uninspiring and inadequate for the bulk of students, whose lifetime work was to be in the manual occupations.¹⁰

On Departmental business as Commissioner of Agriculture, Professor Robertson examined technical education

⁹ Lindley H. Bennett, "Introduction of Manual Training to Canada," unpublished paper, Alberta Provincial Institute of Technology and Art, Calgary, (date unknown), page 1.

¹⁰ Ibid.

offered in the Eastern United States and in Great Britain.

Dr. Robertson based his plan for introducing manual training into the public schools of Canada very largely on the information and recommendations of the report of the 1897 Viceregal Commission in Ireland under the Board of National Education.¹¹ The Commission was instructed to determine how far and in what form manual and practical instruction should be included in the educational system of the primary schools. It submitted its report June 25, 1898 following a study which included visits by commissioners to schools in Ireland, England, Scotland, Sweden and Denmark, and by assistant commissioners to schools in Germany, France, Switzerland and Holland.

The Commission expressed a conviction that manual and practical instruction ought to be introduced as far as possible into all schools where it did not exist, and where it did, it should be developed and extended. The report states:

The present system, which consists largely in the study of books is one-sided in its character; and it leaves some of the most useful faculties of the mind absolutely untrained. We think it important that children should be taught not merely to take in knowledge from books, but to observe with intelligence the material

¹¹ James W. Robertson, "The Macdonald Manual Training Schools," Canadian Magazine, 1901, volume XVI, page 528.

world around them;...that they should even at school acquire some skill in the use of hand and eye.... Such a training we regard as valuable to all, but especially valuable to those whose lives are to be mainly devoted to industrial arts and occupations. The great bulk of the pupils attending primary schools under the National Board will have to earn their bread by the work of their hands; it is therefore important that they should be trained, from the beginning, to use their hands with dexterity and intelligence.¹²

The report notes that wherever manual training had been introduced, it was almost invariably continued and extended. Lastly, the Commission observed that manual training in the elementary school is prerequisite to industrial training in a technical school, and that in Ireland most boys were not ready to enter a technical school even if they had such a school at their doors.¹³

Dr. Robertson said of the report: "I am greatly indebted to it.... Its statements are clear as sunshine, strong with words of wisdom, and convincing as truth itself."¹⁴

The purpose of the Macdonald Manual Training Plan was to furnish an object lesson in manual training in the public schools of at least one town or city in every Canadian province for a period of three years. The Fund

¹² Ibid., page 528.

¹³ Ibid., page 530.

¹⁴ Ibid.

provided adequately for the scheme, including work benches and tools, improvement and maintenance of the rooms, salaries of the instructors, and the instruction in manual arts of teachers in training at normal schools during the three years. Buildings and suitable rooms were provided by contracting school boards. Altogether, the Fund provided manual training for 6,000 public school boys, usually those in grades VII and VIII.¹⁵

Selected centers for these schools were those from which the movement could spread most rapidly throughout each province, and in which manual training would most quickly benefit the students receiving it. First begun in Fredericton, New Brunswick, and Brockville, Ontario in April, 1900, manual training under the Plan became in the following year a part of the public school course in Charlottetown and Summerside, Prince Edward Island; Truro, Nova Scotia; Fredericton, New Brunswick; Westmount, Montreal, Waterloo, Knowlton and Bedford, Quebec; Ottawa, Brockville and Toronto, Ontario; Winnipeg, Manitoba; Regina and Calgary, North-West Territories; Victoria and Vancouver, British Columbia.¹⁶ Eventually twenty-one centers were supplied with equipment

¹⁵ Ibid., page 531.

¹⁶ Ibid., page 532.

by the Foundation.

In order to obtain the best possible results from the Plan, it was considered necessary to engage specially-trained teachers, many with experience outside of Canada. In 1900 twenty-four teachers were brought from Great Britain, two from the United States, and one from Sweden.¹⁷ These twenty-seven teachers were just a few short of the total number of experienced teachers required to begin the work in the Macdonald manual training schools. Several Canadians were employed as assistant teachers with a view to becoming full instructors.

An intention to send several Canadian teachers to Great Britain and Sweden for training was dropped. Instead, prospective manual training teachers were given the opportunity to train in Canada at summer schools, in Saturday classes, and on the job as assistants to qualified instructors.

The first summer school in Canada for teachers of manual training was instituted at Brockville, Ontario in July, 1900.¹⁸ Summer schools were held in Ottawa and Knowlton (Quebec) in 1901, and in Ottawa and Regina in 1902.

¹⁷ *Ibid.*, page 533.

¹⁸ Bennett, *op. cit.*, page 3.

Saturday classes were held in numerous centers. In Ottawa Saturday classes were attended by more than ninety teachers and in Montreal by more than one hundred.

The end of the three-year demonstration period came in June, 1903. At this time most of the forty-five instructors teaching under the Plan were engaged by local school boards throughout Canada, and the equipment of the training schools was given to schools which chose to continue the work.¹⁹ At the close of the demonstration period over seven thousand boys in public schools and several hundred teachers-in-training in normal schools were receiving manual training. Everywhere, the experiment was regarded as a success.²⁰

IV. EXPANSION OF VOCATIONAL EDUCATION IN CANADA (1900-1916)

Following the termination of the Macdonald program manual training continued in most of the provinces. Prince Edward Island was an exception. The commencement of instruction in domestic science at the Prince of Wales College in Charlottetown in 1908 appears to have been the province's major development in vocational education during

¹⁹ Ibid.

²⁰ Ibid., page 4.

this period.²¹

In Nova Scotia a Provincial Act in 1900 provided for a grant of fifteen cents per student per lesson with a maximum of \$600 annually to each school which provided manual training.²² In 1903 eighteen schools (all in urban centers) provided manual training classes and seven other schools were about to do so. A special six-month course was established in Truro to prepare shop instructors for the Maritime provinces and a supervisor of manual training was employed by the Provincial Government to direct work in mechanical and domestic arts. In 1907 the direction of classes for coal miners was transferred from the Province's Department of Mines to the Provincial Department of Education. An Act in 1907 relating to technical education provided for the establishment of an engineering college and three types of vocational classes: classes for coal miners, evening technical classes, and short courses for industrial workers.²³

Vocational education in New Brunswick began with the Macdonald manual training experiment. In 1901 a Provincial

²¹ Vocational Education in Canada, op. cit., page 8.

²² Bennett, op. cit., page 4.

²³ Vocational Education in Canada, loc. cit.

Act provided for a grant of \$50 to any classroom teacher instructing manual work part time, \$200 to any full-time manual training teacher, and grants to cover the cost of one half of the equipment for every manual training room.²⁴

When the fund lapsed, about a dozen centers, mostly urban, were opened to continue providing manual training at public expense. There was, however, "no further development" in the remainder of the period.²⁵

Municipalities in Quebec were reluctant to take advantage of grants provided under a Provincial Act in 1897 for existing vocational schools until 1907, when the Government provided further subsidies.²⁶ Jointly, the Mechanics' Institute and the Canadian Manufacturers' Association erected the Commercial and Technical Institute in Montreal under the control of the Protestant section of the Board of Education. Specialized vocational training was greatly accelerated by the construction of technical schools in Montreal, Quebec and Shawinigan Falls through the combined efforts and capital of the Government and private industry. These schools were designed to supply industry with trained

²⁴ Bennett, loc. cit.

²⁵ Vocational Education in Canada, op. cit., page 9.

²⁶ Ibid., page 12.

production workers as well as highly skilled workers.

In addition to the expansion of manual training in Ontario public schools during the early years of the century, provision for more advanced industrial training came in 1909 with the opening of the Technical Arts School, and in 1910 with the opening of a mining course in Sudbury. Vocational education on a province-wide scale came as a result of a report in 1910 by Dr. Seath, then the Provincial Superintendent of Education, after he had made a survey of industrial education in the United States and Europe.²⁷ His recommendations called for the appointment of a Provincial director of technical education, adequate financial grants by municipalities, the Province and the Dominion; and a wide variety of vocational schools and classes: (1) the extension of manual training and home economics for children under 14, (2) general industrial schools with classes in English, mathematics, science, and shopwork (3) technical high schools offering three-to-four year courses in specified trade work (4) evening vocational classes (5) vocational correspondence courses and (6) schools for apprentices.²⁸ The Industrial Education Act of 1911 implemented many of

²⁷ Ibid., page 13.

²⁸ Ibid., page 14.

these recommendations.²⁹ The first Provincial director of technical education was appointed in 1913. Because the mass of the public had to be convinced of the need for technical training, progress was at first slow and the opening of evening classes for adults was the first step.³⁰ In 1916, in addition to a school of mining in Sudbury, full-time technical schools were in operation in Toronto, Hamilton, London, Brantford and Sault Ste. Marie.

Manual training in British Columbia was discontinued for two or three years after the expiration of the Macdonald project. Resumption of the training at some of the municipal elementary schools at public expense was followed in 1909 by the extension of manual training to the high schools. Vocational evening classes in some Vancouver schools opened in 1909, and in 1910 Provincial grants provided for the purchase of equipment. The Royal Commission on Technical Education (1910) reported that though there was a growing need for technical education in British Columbia, the Provincial Government had done nothing towards establishing it.³¹ Subsequent developments included an extension of evening

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid., page 30.

classes, the appointment of a Provincial director of vocational education in 1914, and the beginning of day classes in technical education at Vancouver's King Edward High School in 1916.³²

The mainly agricultural economies of the prairie provinces required a somewhat different form of industrial development. There has not been the same need for fully-equipped technical schools as in the nation's more highly industrialized areas; and stress, therefore, was placed on agricultural courses and domestic science.³³

In Manitoba evidently little was done in vocational education following the expiration of the Macdonald Program until 1912, when St. John and Kelvin schools were opened in Winnipeg. The event was considered to have been a modest implementation of the Provincial Royal Commission's sweeping recommendations in its report of 1910.³⁴

Discontinued in 1903, manual training in Saskatchewan was revived in 1909 when classes in household science were also begun. Commercial-course offerings followed. Further interest in an expansion of agricultural education and

³² Ibid., page 21.

³³ Ibid., page 17.

³⁴ Ibid., page 16.

and domestic science, both in regular high schools and in special summer schools, followed the report in 1913 of the Saskatchewan Educational Commission and the passing of the Dominion Agricultural Assistance Act in the same year.

V. EXPANSION OF VOCATIONAL EDUCATION IN ALBERTA (1900-1916)

Although agriculture became in 1892 a compulsory subject in the curriculum of the North-West Territories, the teaching of the course was for over two decades generally inadequate and unsatisfactory, especially in the rural

³⁵ areas. Practical instruction in agriculture which first appeared in about 1913, was followed in 1914 by the incorporation of agriculture as an examination subject into the Grade XI program. The latter step was a result of the Provincial Government's policy drafted in the same year to strengthen instruction in all areas of technical

³⁶ education. Marked progress was made with the opening in 1913 of schools of agriculture in Olds, Claresholm and Vermilion under the Provincial Department of Agriculture.

The teaching of domestic science was given serious

³⁵ Alberta, Department of Education, Annual Report, Edmonton, 1905-1918 passim.

³⁶ Ibid., 1914, page 47.

attention first in Calgary and Edmonton in about 1909 for the upper grades of the public school. By 1914 it was being offered also in Medicine Hat, Lethbridge, and by special arrangement, in Raymond. A Provincial grant was authorized at this time to aid rural and urban schools in making provision for such instruction.³⁷

Manual training, which consisted mainly of woodwork, was provided by the Macdonald foundation in Calgary, and adjacent Nose Creek. In 1902 the Calgary Public School Board passed the following resolution, testimony of the success of the experiment:

Resolved that after almost two years' attendance of our pupils at manual training classes which has fully confirmed our opinion of the very great benefit to be derived from such training we strongly recommend that the subject (provisional course) be placed on the school program of studies, and that the curriculum be so modified as to allow ample time for the teaching of it.³⁸

By 1913 agriculture, business education, manual training and domestic science had become important subjects in public and high schools of Alberta cities. Instruction in these subjects to teachers-in-training at the Normal schools was extended with the opening in that year of the first

37

Ibid., page 46.

38

North-West Territories, Department of Education, Annual Report, Regina, 1903, page 52.

summer school for teachers at the University of Alberta. Almost nothing in the teaching of vocational subjects had yet been accomplished, however, in the smaller town and rural schools.³⁹

The urban centers had now brought to a significant degree of maturity the first stage of vocational education--its provision at the basic level for the purpose of developing a student's skill in using "hand and eye to execute the conceptions of the brain."

The year 1914 was marked by accelerated progress in the entire field of vocational education.⁴⁰ This advancement was due largely, no doubt, to the authorization of a Provincial grant to aid rural, village, town and city schools in providing such education, and to the formulation of a Provincial policy regarding technical education, bringing to an end the period of governmental "laissez-faire" in this vital area of education.⁴¹

The second stage in the development of vocational education--its provision in a more advanced and direct form--began at this time with the opening of evening classes,

³⁹ Alberta, Department of Education, Annual Report, Edmonton, 1913, page 11.

⁴⁰ Ibid., 1914, page 11.

⁴¹ Ibid., pp. 39-46 passim.

day prevocational classes, and day vocational (technical) schools. In 1914 Dr. J.C. Miller was appointed the first Provincial Director of Technical Education.

First begun in Lethbridge in 1911, evening classes in urban centers offered a wide variety of technical subjects and were organized and directed largely through the effort of the municipal school boards. Dr. Miller visited many smaller centers where, through his efforts, evening classes providing instruction in coal mining, business practice, and in several other subjects were opened. The total enrolment in evening classes in 1915 was 3,571.⁴²

Prevocational schools were first opened in the fall of 1913 in Calgary and Edmonton, as an experiment, for students "who need the appeal of the vocational motive to hold them in school," and whose "future outlook leads them into the commercial and industrial fields, the skilled trades, the home and the agricultural pursuits."⁴³ Generally, half the time was given to industrial work and the other half to academic work including all the Departmental examination subjects. This type of school proved successful and led to the erection of technical schools where some of

⁴² Ibid., 1915, page 67.

⁴³ Ibid., 1913, page 42.

the day-class work was properly classified as vocational.

Lethbridge in 1911 was first to erect a manual training school, opened in February, 1913. Courses offered included commerce, blacksmithing, woodworking and domestic science.⁴⁴ The school was closed, however, in 1916 because of financial difficulties encountered by the School Board. The pre-vocational class that had been organized was disbanded, and the Board's technical education director, the supervisor of elementary manual training, the instructor of household arts and the supervisor of physical education were discharged as the School Board had decided to dispense with their services.⁴⁵ Thus vocational education was struck from the curriculum in Lethbridge schools, not to be reintroduced until 1935.

The technical classes opened in temporary quarters in Calgary in 1911 were also closed, and in Medicine Hat the contract for the erection of a large vocational school on which construction started in 1914 was cancelled.

The policy of retrenchment, adopted by many school boards in view of inflation and high borrowing, seriously

⁴⁴ Bennett, op. cit., page 5.

⁴⁵ Alberta, Department of Education, Annual Report, op. cit., 1915, page 37.

set back vocational education at all levels. In 1916 the office of Provincial Technical Education Director was largely dispensed with, as Dr. Miller, appointed District Vocational Officer for the Military Hospitals Commission in that year, was required to devote most of his time to Commission work. No separate reports on technical education appear in the annual reports of the Department of Education between 1916 and 1918 inclusive.

The first successful technical school in Alberta was opened in Edmonton in 1913. The temporary quarters were provided at a cost of \$28,000 including necessary equipment. Although the subjects taught in day classes were largely prevocational, the instruction given in the evening classes was of a decidedly vocational nature.⁴⁶ The day-class enrolment in the first term was 75 boys; the evening-class enrolment was 182. Turned away from evening classes were 101 others for whom there was no accommodation.

The Normal schools and the Department of Education's summer schools at the University of Alberta continued to provide the training required for teachers of vocational subjects. During the first two years of World War I, attendance at the summer schools for teachers continued to

⁴⁶

Ibid., 1913, page 72.

rise. Out of a total of 2,213 teachers receiving credit in the four summer sessions 1913-16, 1,127 received credit in agriculture and gardening, industrial arts and domestic science courses.⁴⁷ The number of student teachers receiving training in the manual arts declined seriously after 1916, however, probably as a result of the War.⁴⁸

VI. ENTRY OF THE DOMINION GOVERNMENT INTO THE FIELD OF VOCATIONAL EDUCATION

The Federal Government's interest in vocational education, as evidenced by the appointment in 1910 of the Royal Commission on Technical Education, brought to an end the Dominion's indifference in this field and consequently marked an important mile-stone in the development of vocational education in Canada. That provincial governments were spurred into greater efforts to further vocational education is suggested by the number of provincial investigations into this field and subsequent grant-providing legislation.

Having shown an interest earlier in the question of

⁴⁷

Ibid., 1916, page 40.

⁴⁸

Ibid., 1918, page 11.

technical education, Mr. Mackenzie King, Minister of Labour, obtained endorsement for the Commission's inquiry from all the provinces, although the premiers of Manitoba, Ontario and Quebec displayed uneasiness at the prospect of the Federal Government's entry into education, which by constitution fell entirely under provincial jurisdiction.⁴⁹

Dr. James Robertson, Chairman of the five-man Commission, reported that "In Canada the general neglect or abandonment of the apprenticeship system is responsible in large measure for the lack of skilled labour in the different industries and trades" and that "from every quarter we have heard that there is a strong need for different and better education for those who work in the trades and industries of the Dominion."⁵⁰ The Commission agreed that Canada was behind the times in training youth for industry and that better training was called for as being vital to national progress.⁵¹

In their report the Commission recommended the

49

J. Castell Hopkins, "The Royal Commission on Technical Education," The Canadian Annual Review, Toronto, 1910, page 325.

50

Report of the Royal Commission on Technical Education, loc. cit.

51

Ibid., pp. 327-328.

establishment of a complete system of vocational education under provincial control in secondary schools throughout Canada but financed jointly by the municipalities, the provinces and the Dominion. The report recommended, in addition, full daytime technical schools, and both evening classes and correspondence courses for persons already employed.⁵²

To pay for vocational teachers' salaries, equipment, bursaries, and for the establishment and maintenance of schools and classes, the Commission recommended a Dominion contribution of \$3,000,000 per annum for a period of ten years.

Resulting from the Commission's recommendations, the Agricultural Assistance Act was passed in 1913 to provide \$10,000,000 in Dominion funds over a period of ten years for the promotion of agriculture and agricultural instruction.⁵³

The Act contained no provision for Dominion supervision over the nature of the program carried out nor the requirement for the provinces to share in the cost. Though the accomplishments were considered to be "very miscellaneous,"⁵⁴ they included the construction and operation of

52

"Vocational Education in Canada," The Labour Gazette, Department of Labour, Ottawa, July, 1919, Page 342.

53 Ibid.

54 Ibid.

agricultural schools as at Olds, Claresholm and Vermilion.

The opening of the Alberta Provincial Institute of Technology and Art in 1916 marked the introduction of the third stage of development in vocational education in that province. By this time the need for vocational education had become recognized "by the capitalist and mechanic, farmer and fisherman, foreman and apprentice, merchant and manufacturer, school and college and university teacher, and illiterate labourer."⁵⁵ Moreover, control and support of this type of education had come to involve governments at every level.

CHAPTER III

THE ORIGINATION OF THE PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

I. INTRODUCTION

Factors which led to the establishment of the Provincial Institute of Technology and Art are numerous, inextricably interwoven and exceedingly difficult to evaluate. There can be no doubt that Alberta's rapidly growing population, (73,022 in 1901; 371,663 in 1911),¹ urbanization and industrialization were major influences. The work of the Dominion Royal Commission on Technical Education 1910-1913, the Provincial policy on vocational education 1914, the subsequent financial grants by the two governments, and conditions arising out of the war were others. The brief but impressive experience the province had up to this time with manual training and technical education was probably another as it aided in bringing the needs for vocational education into sharper focus. These and many other factors combined to prepare the way for the final chain of events which precipitated the establishment of the Alberta Provincial Institute of Technology and Art.

¹

The Canada Year Book 1911, Canada Bureau of Statistics, Ottawa, 1912, page 2.

II. THE ESTABLISHMENT AND FAILURE OF CALGARY COLLEGE (1910-1915)

Perhaps the first event of a series which led directly to the establishment of the Institute of Technology and Art was the decision by the Lieutenant-Governor-in-Council to locate the University of Alberta in Strathcona. Citizens of Calgary were displeased by the choice, for since the placing of the Capital by Dominion Statute at Edmonton, they "entertained the expectation that the University would be placed in their city."² In 1910 a number of Calgary citizens petitioned the Legislature for the incorporation of a university at Calgary. The petition was in apparent disregard of an Act passed in 1906 by the Provincial Legislature providing for the establishment of only one university in the province in order to escape "the evils which by reasons of competing institutions had been experienced by the Eastern Provinces."³

Notwithstanding, the Legislature gave incorporation to Calgary College, a privately supported institution, but did not empower the College to confer degrees.

Private donations together with a municipal grant of \$150,000 made possible the opening of the College in October,

² Report of the Commission appointed to consider the granting of degree-conferring powers to Calgary College, loc. cit.

³ Ibid., page 3.

1912 in temporary quarters with a staff of four professors, twenty-four regular and one hundred one students attending one or more classes.⁴

The expected increase in enrolments and financial support did not materialize. The enrolment of regular day students in the 1914-15 term fell to seventeen, that of the "special" students to thirty-two. Building operations were suspended in the summer of 1914, a measure necessitated by the financial depression and other conditions of the war.⁵ Calgary's Mayor Costello had refused aid beyond the \$150,000 grant by the city. He argued that it was entirely too much to expect the city to support the new university and advocated transforming it into a technical college, which would receive aid from both the provincial and federal governments and do away with possibilities of friction with the University of Alberta.⁶ The reason given by College authorities for the inability of the College to attract students in greater numbers and to secure the financial support expected was the failure of the College to secure the authority to

⁴ Ibid., page 4.

⁵ The Calgary Daily Herald, Calgary, Alberta, August 29, 1914.

⁶ Ibid., April 1, 1914.

⁷ Report of the Commission on Calgary College, op. cit., page 4.

confer degrees. In 1913 College authorities renewed their application for university powers.⁷ When the Bill containing the application came before the Legislature on October 2, 1913, authority was given for the appointment of a Commission* to enquire into and consider the proposal.

The plea for a degree-conferring university in Calgary stated that the center of population in Alberta had moved southward by forty-eight miles from 1901-1911, forecast that Calgary would be the center of a great industrial and agricultural development, and requested for Calgary a university which "while having a strong central Arts Faculty, should pay special attention to applied Science and Technology."⁸

The Commissioners reported that they were impressed during the hearings by the recurrence of the opinion that higher technical instruction was required in Calgary to meet local needs:

Dr. Scott, the Superintendent of City Schools, stated that an institution of higher learning in Calgary, if choice had to be made, should give the preference to some sort of vocational training. In this opinion Dr. Scott was seconded by Mr. Kidner, Director of Technical

* Members of the Commission were: Robert A. Falconer, C.M.G., L.L.D., D.Lit., President, University of Toronto as Chairman; W.C. Murray, M.A., L.L.D., President, University of Saskatchewan; A.S. MacKenzie, B.A., Ph.D., F.R.S.C., President, Dalhousie University, Halifax.

⁸ Ibid.

Education, Calgary Public School Board and in the special emphasis which he placed upon sociological and technical courses he was strongly supported by the religious and charitable organizations and by the Trades and Labour Council.

Mayor Sinnott, who, as Chairman of the School Board, had introduced technical training into the city schools, said, "My opinion is that the College should be along scientific lines." [sic] and that in the advancement of technical work, the College should take a leading part.

The Bishop of Calgary depreciated [sic] the establishment of a "rival to the University of Alberta," and thought that "a definite aim could be kept in view between the two institutions," and that conditions perhaps "point to our having technical and scientific education" and "that we should study to guide our institution so as to interfere as little as possible with the University of Alberta, and yet, of course, take a high position."

Dr. MacRae, Principal of Western Canada College, in answer to the question, "If there were to be but one faculty in Calgary, which would be the greatest value to the City, Arts or Applied Science," replied, "I think Applied Science. That would appeal to our people more at this stage. I do not think I would desire it as much myself, but I think the population at large would prefer it."

Mr. R.B. Bennett, M.P. said, "Agriculture is our main asset, and we must give scientific training to those who till the soil. If the city would be the home of such an institution, it would be doing the greatest work that it is possible to do. I put Agriculture first and a technical school second, and as for Law and Arts, I am not concerned."⁹

On the basis of a study of the operations of the University of Alberta and a number of American universities, the Commission concluded that (1) the resources at the disposal of Calgary College were not such as to warrant the granting

or degree-conferring powers, (2) the province was not justified in providing grants-in-aid (as asked for by the College authorities) for the reason that for many years to come the needs of the University of Alberta and other educational and public institutions of the province would increase even more rapidly than the population and revenue, (3) the existence of rival universities would have a detrimental effect on university educational standards (4) the University of Alberta adequately serves the entire province and would not become of an unwieldy size for many years to come, and that (5) the establishment of a single state university is the wise policy.

In addition to the recommendation by the Commission that the petition of the Calgary College for degree-conferring powers be not granted were the following:

2. In consideration, however, of the substantial interest already manifested by the citizens of Calgary in the improvement of educational facilities within their city, and of the demand by the educational and industrial interests of the city for a more extended instruction in Technological, Social, Economic and allied subjects; also in consideration of the Provinces need of an institution to train and equip teachers qualified to give special instruction in Technology and the Fine and Applied Arts; we recommend that an Institute of Technology and Art be established in the City of Calgary, to be supported and controlled jointly by the City and the Province.

3. We recommend that this Institute of Technology and Art be empowered to grant certificates and diplomas and

to give instruction in such subjects as:

- (a) Mathematics, the Sciences and their application to the trades and industries (including mine management), etc.
- (b) Applied Mechanics: Drafting, Machine Design and Construction; Wood and Metal Working; Tool and Pattern Making; Building Construction; Sanitation and Plumbing; Industrial Electricity; steam and gas engine work, etc.
- (c) The Fine and Applied Arts.
- (d) Household Science.
- (e) Accounting, Business Methods and Commercial Subjects, Printing and Journalism etc.
- (f) English and Modern Languages; General and Industrial History; Economic, Political and Social Science, etc.
- (g) And such other subjects within the scope of the Institute, defined in this and the following sections, as may be determined from time to time.

4. While it is intended that the Institute shall not organize courses of instruction leading to Engineering, Medical or other professional degrees, nor the advanced courses required for the Bachelor's degree in Arts or Science, which are reserved to the University of Alberta, we recommend that the Senate of the University be requested to give to students coming to it from the Institute credit towards a degree for such classes taken in the Institute as may be equivalent to those in the same subjects conducted by the University; and further, that the Institute be admitted to affiliation, and granted representation on the Senate of the University.

5. We recommend that the management of the Institute be vested in the Board of Directors appointed partly by the City and partly by the Province; that the academic affairs of the Institute be entrusted to a Faculty Council subject to the approval of the Board of Directors; that in the appointment of the members of the staff, other than the Principal, nomination by the Principal shall first be required.

6. We recommend that the support of the Institute, exclusive of the income from fees, gifts, and endowments, be borne equally by the City of Calgary and the Province of Alberta.

SUGGESTIONS

Your Commissioners also respectfully suggest:

1. That the Board of Directors consist of nine members,-- the Principal of the Institute, four members representing the City of Calgary and four representing the Province; that of the four members representing the City of Calgary, three be appointed by the School Board and one elected by the Benefactors; that the four members representing the Province be appointed by the Lieutenant-Governor-in-Council; that the term of office of the elected and appointed members be three years, and that not more than three of them retire annually; that any person who has given at least \$500 in money, buildings, land or equipment to the Institute shall be deemed a Benefactor and entitled to vote for the Director referred to above.
2. That the Faculty Council consist of the Principal and not more than ten other members of the staff, designated by the Board of Directors.
3. In order to provide the Institute with a revenue that will not be subject to annual fluctuations and yet expand to meet the growing needs, we would suggest that the City's share of the annual maintenance be provided in a manner similar to that adopted by the City of Cincinnati, and that the Provincial grant bear a definite ratio to that of the City.
4. That the sum of \$150,000 heretofore voted by the City to Calgary College and the gifts already promised by individual citizens, be devoted to the erection of a building for the Institute which shall be worthy of the City of Calgary.¹⁰

10

Ibid., pp. 12-14.

Bankrupt and unable to secure financial aid, the College closed its doors in the spring of 1915.

111. MULTI-GROUP EFFORTS TO ESTABLISH THE INSTITUTE

In the recommendations of the Commission, however, the governors of the College saw an opportunity to continue its work in the institution envisaged by the Commissioners, and to share in the control of the proposed technical and arts college.

On the release of the report of the Commission, the Board of Governors of the expiring College called a public meeting for Saturday, March 6 to initiate a course of action with regard to their own objectives and to the recommendations of the Commission.

The deliberations at this meeting attended by two hundred citizens resulted in the appointment of a committee "to explore the immediate possibilities of the situation and confer with representatives of the Provincial Government."¹¹

At a meeting of the committee, composed of representatives of education, the City and of business, opinions on the Commission's recommendations were divided, ranging from the desire of the Governors of the College for the

¹¹ Phyllis Weston, "History of Education in Calgary," op. cit., page 78.

continuation of Calgary College supported by municipal and provincial funds, to the desire of School Board members for the establishment of an institute of technology and art as proposed by the Commission.

Mr. T.B. Kidner, technical education director for Calgary's public schools, argued that "even a start with a modest technical high school offers wonderful possibilities of extension" and that "its possibilities are unlimited."¹² He pointed out that an institute of technology and art would broaden the facilities of education and would help in securing an adequate supply of teachers of vocational subjects. Mr. A. Ross, a member of the Public School Board expressed the opinion that the institute of technology and art would be a natural outgrowth of the existing evening classes. Dr. Blow, M.P.P., and chairman of the Board of Governors of Calgary College, asked where the students for such an institute would come from. Mr. J.C. Macdonald, chairman of the School Board, replied that they would come from the public schools or from the night schools. He added that schools were losing their pupils early because of the lack of higher education that would meet students' needs and fall within their grasp, and observed that while there were 1,362 grade two pupils in Calgary's public schools there were only 49

¹² The Morning Albertan, Calgary, Alberta, March 8, 1915.

in grade twelve.¹³ Mr. Kidner, in reply to the question from Dr. Blow of entrance requirements, said that in such institutions they were broad, varying from completion of elementary school to completion of one year in high school. Dr. Blow expressed doubt as to the supply of material to work upon, with Western Canada only young in its industrial development, whereupon Hon. G.H. Cushing replied that western Canada's youthfulness in industrial development was the very reason why a venture such as the establishment of an institute of technology should be made. "We have been talking for years about our wonderful resources," he said, "It requires technical ability to develop those resources in the proper way. Even with our present manufactures, we find difficulty sometimes in getting men with the technical knowledge required."¹⁴

A resolution to be brought before a mass meeting March 13 was passed on the casting vote of the chairman of the meeting, Dr. Blow; then made unanimous. The resolution recommended to the citizens "that the Provincial Government be asked to establish such an institute of technology and art associated with the Calgary College, the College to be continued as an arts college giving at least two years

¹³ Ibid.

¹⁴ Ibid.

University work and the Province to bear the full cost of maintenance."¹⁵

At a second meeting of the committee held at the School Board offices, March 11, secretary Alex Calhoun called for the rescinding of the motion passed at the previous meeting and substituting for it a motion which called for an equitable sharing of maintenance costs of the proposed institute as he considered it unreasonable to ask the government to bear the whole cost of the institution and unwise to exclude local interest, an element without which he thought the institute would be of doubtful value. Mayor Costello thought that the city might resubmit the bylaw of \$150,000 to the ratepayers, and as for a charter amendment, to buy some fraction of a mill for technical education in Calgary.¹⁶ He expressed the opinion, however, that the Provincial Government should maintain the institute.

The alternate motion was not put to the meeting as it was thought that the question of support would be the central issue of the mass meeting planned for the following day.

Following a few hours' discussion a sub-committee composed of Mr. Kidner, Doctors MacRae, Kerby and MacDougall and Rev. Father MacDonald drafted an outline of the scope of

¹⁵ The Calgary Daily Herald, March 9, 1915.

¹⁶ Ibid.

the institute of technology and an estimate of capital and maintenance costs. Mr. Kidner described the courses and stressed that the draft was the merest outline of the scope of the proposed school. The draft reads as follows:

The undersigned being the sub-committee appointed "to prepare an outline sketch of the initial scope, status, etc. of an Institute of Technology with a rough estimate of its annual cost, and the cost of a two years' arts course," beg to present the following recommendations and opinions:

(1) Scope of Institute

The Institute of Technology and Art to comprise four schools:

- (a) Mechanic arts department
 - (1) Building trades
 - (2) Engineering trades
 - (3) Mine management
- (b) Household arts department (school for women)
- (c) School of commerce
- (d) School of fine and applied arts
- (e) Department of forestry

(2) Courses

In each of these schools there should be day courses:

- (a) Regular courses of 2 and 3 years
- (b) Short courses
- (c) Intensive one-year vocational courses
- (d) Vocation courses (teachers and others)
- (e) Vocational teachers' courses
- (f) Correspondence courses

Night Courses

- (a) Preparatory
- (b) Three or four-year regular courses
- (c) Vocational teachers' courses

(3) Entrance Qualifications

These should vary for different courses. For regular day courses, the pre-requisite might be graduation from the public schools; plus one year in a high school or its equivalent.

(4) Status of Students

The institute to grant diplomas and certificates for work done.

(5) Cost of Building Equipment

For the combined college and Institute of Technology and Arts, your committee estimates that the buildings and equipment would cost from \$400,000 to \$500,000 your committee is of the opinion that smaller buildings grouped conveniently would be preferable to one large building.

(6) Maintenance

As the instructors in the arts college would also be engaged in the teaching of the subject of the Institute of Technology and vice versa, your committee found a difficulty in complying with the terms of reference in regard to estimating the annual cost of each separately. In the opinion of your committee a gross annual budget of, say, \$50,000 to \$60,000 would be required.

(7) Fees

Your committee is of opinion that fees should be charged.

(8) Governing Bodies

Your committee is of the opinion that the suggested governing body should be enlarged to consist of at least thirty members, respecting a wide variety of interests and localities; to be appointed in part by the city and in part by the lieutenant governor in council, [sic].

(9) Legal Aspects

In view of the legal aspects of the changes which may be involved in the charter of Calgary College in virtue of the recommendations of the commission, your committee recommends that a small committee be appointed to consider and report upon the matter.

(10) Teaching of Agriculture

In view of the necessity of training teachers in the province your committee is of opinion that Calgary College and the Institute of Technology should include instruction in agriculture.¹⁷

In a markedly revised form the resolution passed at the first public meeting was endorsed at the mass meeting on the afternoon of March 13. The resolution now read:

Your committee recommends that the government be asked to establish an institute of technology and art, as suggested by the commissioners, in connection with Calgary College, the college to be continued as an arts college, affiliated with the University of Alberta, the institute to technology and art to be maintained by the province.¹⁸

Mr. George Bryan, a governor of the College, pointed out that the Government was not being asked to contribute to the support of Calgary College. The question was whether it was desired to have the Calgary College and the technical institute linked together, separate, or the College dispensed with. A motion made by Mr. Joseph Shaw and seconded by Mr. George Ross to strike out of the resolution the references to Calgary College was lost. Mr. Ross was of the opinion that there was little likelihood of Calgary getting both

¹⁷ Ibid.

¹⁸ Ibid., March 15.

the College and the technical school at this time. He stated that it would be more practical to ask for the institute now and an arts college later.

A delegation appointed to convey the recommendations of the committees to Provincial authorities in Edmonton included representatives of the City, the Senate and the Board of Governors of Calgary College, the Public and Separate School Boards and other educational institutions, the Trades and Labour Council, and employers.

In an interview in Calgary on the same day Hon. J.R. Boyle, Minister of Education, expressed optimism regarding the establishment of an institute of technology and art in Calgary but indicated that the institute must be along the lines laid down by the Royal Commission. He suggested that the school would not be meagre or merely secondary in scope and that the Government would use it as a summer school for the training of teachers.

In Edmonton on March 24 the deputation was received by Premier Sifton, several members of his cabinet, and later in the day separately by the Minister of Education. Premier Sifton expressed a ready willingness to accept the recommendations of the Royal Commission on behalf of the Government. The Premier informed the delegation that he could not read into the Commission's report any advice that the institute of technology should be operated separately from Calgary

College, and that he did not believe "that the present was proper time to experiment with dual institutions, which were certain to increase the cost of operation without any promise of increasing efficiency."¹⁹ He suggested that a small working committee of those best qualified to arrange details be appointed to work with Mr. Boyle, and reiterated that the Government was prepared at once to assume their share in carrying out the recommendations of the Commission.

At a later meeting of a sub-committee consisting of A.H. Clarke, K.C.; Mayor Costello, Dr. McDougall, Dr. A.O. McRae, Alex Ross, G.J. Bryan and W.M. Davidson with Mr. Boyle, it was decided that the party, on its return to Calgary, would redraft the charter of Calgary College to embody the technical institute. The redrafted charter was to be sent to Mr. Boyle the following week in order that, in the form of a Bill, it could be passed by the Legislative Assembly then in session.

It seemed to be generally agreed that no large expenditure would be made in the current year and that only a humble beginning could be expected. Mr. Boyle expressed, nevertheless, the hope that the Government would be able to erect the new Normal school adjacent to the institute of technology and art, an arrangement which he thought would make possible the

¹⁹ Ibid., March 24, 1915.

creation in some central location of an educational center which would be of immense value to the city of Calgary and to the Province in years to come.

The question of representation on the directorate of the new institute had become, however, a major obstacle in the way of further progress. The Commission had recommended that the cost of maintenance of the institute be shared equally by the city and the Provincial Government, and that their representation on the institute board of governors be likewise equal. The Government requested that the College hand over to the new institute all its assets, the surrender of which would entitle the donors of Calgary College to appoint one representative to the board of directors of the institute, inclusive of the four directors to which the City was entitled. Dissatisfied with the Government's offer, the College Board demanded the power to appoint four representatives to the new directorate, in addition to the eight members appointed as proposed by the Government.²⁰

In the process of amending the proposed charter, the members of the committee who were also governors of the College objected strenuously to the method of appointing the

²⁰ The Morning Albertan, April 15, 1915.

board of governors for the new institute, "contending that Calgary College should have such a representation on the board that would make it reasonably certain that provincial or municipal politics should not be allowed to interfere with the effective control of the institute."²¹ The majority of committee members chose to adhere to the recommendations of the Commission regarding the appointment of directors, with the change "that instead of three members being appointed by the school board they should be appointed by city council."²²

Also, the committee requested in the revised charter that in addition to the directorate of nine members who would manage the financial affairs of the new institution, there be a senate of twenty members who would take charge of the educational affairs of the College, a further departure from the Commission's recommendations. Four of the directors were to be appointed by the Province, three by the Calgary city council, one by the donors of the College, and the ninth by the directors.²³

The redrafted charter of the proposed Calgary College

21

The Calgary Daily Herald, April 15, 1915.

22

Ibid.

23

The Morning Albertan, April 7, 1915.

and Institute of Technology was presented to Mr. Boyle in Calgary, April 6th.* The Minister remarked that although he had not closely examined the Bill he considered it a basis for a satisfactory Act although, perhaps, the powers of the senate were somewhat extreme. He suggested that a committee of three, one of whom should represent the city, one the Calgary College and one the School Board should meet him during the week and come to some definite conclusion.

It was decided that A.H. Clarke would represent the board of governors of the College and that the city would be asked to send a representative. No further mention was made of School Board representation.²⁴

At an evening meeting on April 13 the Public School Board decided on a course of action to ensure the continuance of negotiations between the Government, the School Board and the City to enable the session of the Legislature to act on the matter of the institute, "if present negotiations with the government ... fall down through the insistence of the Calgary College governors for extra representation."²⁵ The committee chosen to act if necessary was to consist of

* Present at the meeting with Mr. Boyle were: Dr. Blow, M.P.P., S. Bacon Hillocks, M.P.P., Dr. Kerby, Dean McDougal, Dr. McRae, W.M. Davidson, T.B. Kidner, G.J. Bryan and P. Burns.

²⁴ The Calgary Daily Herald, April 8, 1915.

²⁵ The Morning Albertan, April 14, 1915.

J.T. Macdonald, W.M. Davidson and Alex Ross, with Dr. A.A. Scott and T.B. Kidner as advisers.

Mr. Kidner stated that failure in negotiations with the Government in Edmonton was due to requests by the College governors outside the bill and outside the recommendations of the citizens' committee. "The Minister of Education declined to consider them and the matter dropped right at the question of representation. The intimation was given, however, that the Government was prepared to deal directly with the School Board and the City if those negotiations fell through."²⁶

It was stated also at the meeting that the governors were reconsidering the situation in the light of the Minister's emphatic refusal to accept the proposals of representation.

On the following day in Calgary Dr. Blow and Mr. George Bryan presented Mr. Boyle a new proposal regarding representation, asking that the minimum representation of the donors be one, but that an additional member be appointed if the donations justified it. They asked that the donations, which were in the form of land, be appraised and that an allowance of 5 percent on the total be regarded as the revenue in the matter of adjustment of representation.²⁷

²⁶ Ibid.

²⁷ The Morning Albertan, April 14, 1915.

Reports regarding the Minister's reaction to the proposal conflict, but evidently the College governors thought that an agreement with the Provincial Government was made at last.²⁸

Evidently dissatisfied with the settlement, Mr. Bryan declared that had it not been for "certain suggestions of an alternative proposition made to the Minister of Education, when negotiations between the College and the Government had reached a deadlock, the Calgary College might have received four additional representatives on the board of directors of the new institute."²⁹

In another statement the governor revealed that the alternate proposal was made by a School Board delegation attached to, but uninvited by a committee from Calgary which met with the Education Minister to continue negotiations.

Mr. Bryan's statement, in part, is as follows:

... Advantage was taken of the presence of the minister of education [sic] in Calgary on Tuesday of last week to discuss the draft with him. He requested that a small committee be appointed to meet with him at Edmonton in order that matters might be fully discussed.

He made the suggestion that one representative be appointed from the city, one from the school board and one from Calgary College. It was pointed out by one of the members of the committee that there were but three contracting parties, namely, the city, Calgary College

28

The Calgary Daily Herald, April 14, 1915.

29

The Morning Albertan, loc. cit.

and the government, and that there would be one representative of each. A resolution was passed to this effect. The mayor was appointed to represent the city, the writer to represent the college, and A. H. Clarke, K.C., was requested to accompany the delegation ...

To the surprise of the members of this committee, it was found that a delegation had been appointed by the school board consisting of W.M.Davidson and T.B.Kidner.³⁰

To the request made by one of the School Board's delegates for permission to submit an alternate proposal if the proposal by the former group were not considered, the Minister replied that it would be inadvisable to consider the School Board's proposal until negotiations with the committee represented by the Calgary College were at an end. The Minister was shown, said Mr. Bryan, "that there was division and disagreement."³¹

Mr. Bryan had no doubt that, in his words, a "better arrangement would have been secured" were it not for the School Board's interference and in a certain section of the press "articles of an alarming nature with respect to the danger of losing the proposed institute."³²

It had now become quite clear that the objectives of the College governors were not consistent with those of the School Board, nor with the recommendations of the Commission.

³⁰ The Calgary Daily Herald, loc. cit.

³¹ Ibid.

³² Ibid.

The School Board wanted an institute of technology; the College Board wanted to save what they could of Calgary College.

It is evident also that the committee which appointed the latest delegation to meet Mr. Boyle did so not only in contradiction to the suggestion of the Minister in this regard, but to the recommendation of the Calgary College Commission that the city's representatives on the institute's board of governors be selected by the School Board.

Further, the members of the committee appointed by citizens of Calgary at the mass meeting on March 15 to open negotiations with the government included Public School Board members Mr. Kidner and Mr. Davidson. It in no way appears that the School Board's representatives were suspended from further negotiations on the authority or wishes of those who appointed them.

Finally, the deadlock delayed legislation on the technical institute until the next session of Parliament.³³

In a statement made public on April 20, Dr. Flow asserted that the City had not yet made any official statement of its intentions regarding recognition of Calgary

³³ The Morning Albertan, April 17, 1915.

College in the matter of representation, or of the "million dollars"³⁴ of donations already given the College. Dr. Blow warned that it would be a fatal mistake for the City to ignore the College. "After all, it represents citizens of Calgary in the same way as the city council represents the citizens."³⁵

The Mayor replied that although Calgary should certainly have the institute, the Legislature, in his opinion, was the only body that at this point could do anything about establishing it.

On April 27 City Council referred a resolution of the governors of the College regarding the question of representation on the technical institute's board of directors to the Council's finance committee.

Representatives of the senate and board of governors of the College met with the finance committee on May 4. It was recommended that the Mayor appoint a member of City Council to co-operate with a representative of the College in a proposed conference with the Minister of Education. The College governor's stand on the question of representation was unchanged.³⁶

Following the conference the Minister outlined the

³⁴ Ibid., April 20, 1915.

³⁵ Ibid.

³⁶ The Calgary Daily Herald, May 6, 1915.

Government's position in a letter dated June 15 to Mayor Costello:

Referring to my interview with yourself, Dr. Blow and Dr. McDougall the other day, I beg to say that there is no question as to the government being prepared to undertake the province's share of the financial obligation in connection with the establishment of a technical institute in Calgary, as recommended by the commission. We are prepared to go further and assist in connection with original capital expenditure.

The commission apparently had in mind that sufficient could be realized from the assets of the college to erect the buildings and equip it, and their proposal was that when the building was complete the institute should be financed, one-half by the city and the other half by the government.

I gathered from the conversation with yourself, and Dr. Blow that it would be difficult at the present time to realize sufficient from the assets of the college for the above purpose. It has therefore been decided that the government will finance one-half of the cost of the building, equipment and grounds if Calgary College and the city of Calgary are prepared to finance the other half.

I might say in connection with this proposal that we are quite willing that the city of Calgary shall utilize in full the assets of Calgary College in connection with financing the half of the undertaking. This is a matter which no doubt can be arranged between the authorities of Calgary College and the city.³⁷

The Mayor expressed considerable displeasure at the Government's proposal. He stated that at the recent meeting in Edmonton he understood the Government would stand the entire cost of buildings, grounds and equipment, above the \$150,000 provided by the city and the assets of Calgary

College. Also, the Mayor contended that the Government should pay the entire costs of maintenance of the institute, as it was doing for the University of Alberta.³⁸

It is recalled that the citizens' committee estimated the cost of the buildings and equipment of the combined college and technical institute as proposed to be between \$400,000 and \$500,000. A bylaw provided \$150,000 as the City's share; the College Board had set their contribution in land and cash at roughly \$500,000.³⁹ The Mayor had not until now objected to the Commission's recommendation that the City and Province share equally the costs of the buildings and equipment. It appeared that the combined contributions of the City and College towards capital costs would have been well in excess of one-half of the estimated costs. On the surface, there appeared to be little reason for the Mayor's displeasure. In substance, however, the situation was quite different.

The conditions which bound the City's grant to Calgary College reveal the helpless situation into which the College had fallen:

1. It shall and may be lawful for the Council to raise the sum of \$150,000 by way of a loan for the purpose of

³⁸ Ibid., June 8, 1915.

³⁹ Ibid., April 15, 1915.

granting a bonus to the Calgary College to be used by the said College exclusively for the purpose of erecting, constructing and furnishing suitable buildings on the northeast quarter of Section fourteen (14) in Township twenty-four (24), Range Two (2), West of the Fifth Meridian in the Province of Alberta; provided however that the said College shall immediately after the final passing of this bylaw execute in favor of the City of Calgary a first charge bylaw of mortgage on the said quarter section for the said sum of \$150,000, which sum shall be by the terms of the mortgage repayable in five years from the date thereof without interest; and provided further, that the said mortgage shall contain a provision whereby the City will undertake and agree to discharge the same if within the said period of five years the said College buildings have been completed and furnished and at least one hundred students are in actual attendance and receiving a regular course of instruction at the said College. No part of the said amount of \$150,000 shall be paid over to the said College until evidence shall have been produced satisfactory to the City Commissioners that bona fide subscriptions have been made by other parties for an equal sum of \$150,000.⁴⁰

Notwithstanding Dr. Blow's proclamations regarding the value of assets held by the College, the institution possessed no liquid assets and was insolvent. The College failed to meet the terms of the City's \$150,000 grant. The buildings were never erected, the enrolment of regular students fell far short of the required number, and the "bona fide" subscriptions evidently did not match the amount of the City grant. Accordingly, the City did not turn over any part of the grant to the College.

College authorities had made repeated requests to City Council for advances on the account of the proceeds of the

⁴⁰ Bylaw No. 1170, City of Calgary, June 27, 1911.

grant in order to meet payments of salaries and accounts due.⁴¹

Finally, on the advice of its finance committee and solicitor, City Council proposed to assume all the liabilities of Calgary College on the condition that the latter surrender its available assets to the City. This and other conditions were accepted by the College senate and governors in a resolution passed by them on July 19, 1915:

WHEREAS the Senate and Board of Governors accept the following as the basis of an agreement as between the City of Calgary and the Calgary College.

First. The Senate and Board of Governors on behalf of Calgary College surrender to the City all claim to the proceeds of city Bylaw No. 1170 granting Calgary College a bonus of \$150,000.

Second. The Senate and Board of Governors on behalf of Calgary College surrender to the City of Calgary, all right to negotiation with the Provincial Government on behalf of the City and the College.

Third. The Senate and Board of Governors do hereby agree to accept all amendments to the College Charter which may be found desirable as the result of negotiations between the Provincial Government and the City of Calgary, and agree to give reasonable assistance in bringing about the said amendments to the College Charter.

Fourth. The Senate and Board of Governors agree in consideration of the City's assuming all the liabilities of the College to pledge or mortgage to the City of Calgary its available assets ...⁴²

In its report to the City Council on July 25 the City's

⁴¹ Minutes of Council, City of Calgary, July 10, 1914, page 504; December 4, 1914, page 731; May 28, 1915, page 525.

⁴² Ibid., July 22, 1915, page 602.

finance committee recommended that College liabilities amounting to \$15,987.55 be paid by the City and charged to a fund selected by the city solicitor and treasurer until such time as debentures authorized to be issued under Bylaw 1170 would be sold.⁴³

The City Council returned virtually all the assets of the College to the original donors and with this act Calgary College and its assets disappeared from the scene.

Nonexistent now was the object of the grant, namely assistance to a privately owned and operated educational institution. Hence the grant, too, for which debentures had not even been issued, left the scene of further negotiations concerning the institute of technology.

IV. CONTINUED PROVINCIAL-MUNICIPAL EFFORTS TO ESTABLISH THE INSTITUTE

Notwithstanding a reduction by the Minister in the estimate of capital costs to about \$140,000, Mayor Costello remained unwilling to co-operate, insisting that the technical institute was to be provincial and that the Government therefore should maintain it.⁴⁴

⁴³

Ibid., July 26, page 605.

⁴⁴

The Calgary Daily Herald, September 15, 1915.

No further progress was made in the remainder of the summer. It should be noted that at this time a setback in land values was so serious as to check temporarily provincial economic expansion and prosperity.⁴⁵ The City's financial difficulties increased and it was announced on September 13 that an additional 100 civic workers would be discharged, raising the number of city workers discharged in the past year to 469.⁴⁶ It was announced also that evening classes in the city's schools would be discontinued. Prevocational classes, however, had proved to be so successful in grades 7 and 8, that the School Board decided not only to continue them, but to extend the work to Grade 9 and to add metal work to the subjects offered.

A conference on September 15 between Hon. J.R. Boyle and the Mayor showed, however, a considerable change in the City's stand. Mr. Boyle stated that the Government would be willing to start in a temporary way in the fall if the City would agree to pay half the cost of the buildings and maintenance. The Mayor pointed out that owing to the lateness of the season any new building for the year was out of the question, but that temporary quarters could be found.⁴⁷ The

⁴⁵ Hopkins, *op. cit.*, 1915, page 688.

⁴⁶ The Calgary Daily Herald, September 13, 1915.

⁴⁷ Ibid., September 15, 1915.

Mayor added that in any case he did not think that the City should be asked to contribute more than one-half the cost of the maintenance. [sic] * Mr. Boyle doubted that the Government would go that far but expressed the hope that now that the question was simply one of finance an early solution would be found.

The Cabinet Council did not agree to Mayor Costello's terms. In a letter to the Mayor, Mr. Boyle wrote, "... I beg to say that I cannot see that there is anything further that can be done by the government ... unless the city has some alternative proposal to offer."⁴⁸

The letter created a good deal of disappointment and resentment in certain Calgary circles and the Government became the object of sharp criticism. The Mayor recalled the recent conference with Mr. Boyle at which the City's proposal called for the equal sharing of capital costs and for the payment by the Government of the annual maintenance costs.

The Mayor considered the City's proposal "eminently fair." He pointed out that the Government paid all of the capital costs of the University of Alberta, maintained it,

* This is probably a reporter's error as the City Council's finance committee suggested in its report of September 14, that the City pay one-half of capital costs and that the Government bear full costs of maintenance.

⁴⁸ Ibid., October 7.

and paid the entire costs of the Normal schools. "Why should the city of Calgary," demanded the Mayor, "after agreeing to pay half the cost of the institution, also pay half of its annual maintenance for all time to come?"⁴⁹

Mayor Costello questioned the seriousness of the Government's intention to establish a technical school in Calgary, and forecast that "even if the city should agree to this unreasonable suggestion, ... the government would find some other objections."⁵⁰

The matter of the sharing of maintenance costs, costs which Mr. Boyle estimated to be about \$12,000 for the first year of the institute's operation, was not, evidently, the most serious problem facing the City in its desire for the establishment of the school.

On October 12 City Council's finance committee was reported to have been on the verge of recommending an acceptance of Mr. Boyle's offer that the City undertake half of the cost of maintenance, but the question had come up as to what was considered one-half the capital investment, and whether the site should be included in the City's share.⁵¹

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ The Morning Albertan, October 13, 1915.

It was stated also that although the City could save the largest part of its costs of providing technical training by turning such instruction over to the institute of technology, it would be a different matter to provide the cash required for the City's share of capital costs unless the Government came temporarily to the City's assistance.

V. DOMINION-PROVINCIAL-MUNICIPAL AGREEMENT TO ESTABLISH THE INSTITUTE

The prospects for the establishment of the institute did, indeed, appear bleak. It was at this time, however, that another, and vitally important element was projected into the whole question of technical education in Canada.

A conference of representatives of Provincial Government and the Federal Military Hospitals Commission decided to appoint commissions to assist provinces in their efforts to provide for returning disabled soldiers: (1) suitable employment for those in need of assistance, (2) disablement funds, (3) vocational training and (4) opportunities for land settlement.⁵²

This was viewed in Calgary as further evidence of the need for a technical institute in that city. Mayor Costello argued that the necessity for providing technical

⁵² Ibid., October 19, 1915.

training for many of the returned soldiers made it very important that the question of the technical institute be settled and that steps be made without delay towards the establishment of the institute. He added that the report of the Military Hospitals Commission was "on the table" and that the Provincial Legislature had to act on the matter. He recommended that the City of Calgary approach the Government to do its utmost to reach a final understanding.⁵³

The Provincial Board of the Hospitals Commission passed a resolution on January 12, 1916 asking that regular school classes be given at the soldiers' convalescent home at Ogden. The need for a technical school, however, was emphasized by the variety of technical courses that the soldiers at the hospital wanted to take. These courses included electrical engineering, drafting, sign painting, telegraphing and telephoning.⁵⁴

Finally, a meeting on February 17 of a deputation* from Calgary with Premier Sifton and Education Minister Boyle brought an agreement.⁵⁵

⁵³ Ibid., December 3, 1915.

⁵⁴ Ibid., January 13, 1916.

* Mayor Costello, Alderman Samis; Trustees J. Shaw, J.T. Macdonald and W.M. Davidson; Superintendents Scott and Fairn; A.J. Jewett and Alex Ross.

⁵⁵ Ibid., February 18, 1916.

The Premier agreed with the delegates' contention that the Province should meet the entire cost of maintenance, particularly if the institute undertook the training of returned soldiers, but added that it was not an opportune time to increase expenditure as the Government was finding its revenue cut the same as the citizens and private individuals.⁵⁶

School Board trustee Macdonald then suggested that one of three schools--Colonel Walker, Alexandra or Ramsay--might be utilized. Premier Sifton proposed that if the City would supply the building, the Province would equip and maintain it. He added that Dr. Boyle and Dr. Miller, Provincial Superintendent of Technical Education, would visit Calgary within a week to survey the situation and estimate the costs involved.

Calgary was at last to have an institute of technology and art, scheduled to open in the autumn of 1916.⁵⁷

⁵⁶ Ibid.

⁵⁷ Ibid.

CHAPTER IV

ESTABLISHMENT OF THE INSTITUTE AND THE RE-TRAINING OF DISABLED SOLDIERS

I. PLANNING THE WORK OF THE INSTITUTE

The Federal Government's entry into the field of vocational education through the Military Hospitals Commission and the consequent promise of financial responsibility for the establishment and operation of technical schools used for the re-training of returned soldiers obviously broke the deadlock in Alberta over the question of the building of a Provincial institute of technology and art. With the impasse broken, work leading to the establishment of the institute in Calgary was quickly begun.

At a meeting on February 22 of the Honorable Mr. Boyle, Dr. Miller, School Board and civic officials, Colonel Walker School (in East Calgary) was selected as the temporary home of the institute of technology. The School Board agreed to turn the building over to the Provincial authorities free of rent for a period of four years. In addition, the Mayor recommended that the No. 3 combined police and fire station, adjacent to Colonel Walker School, be similarly provided. The fire station

was to house the shops, and, to allow time for their equipping, Dr. Miller urged that the station be turned over to the Provincial Government at once. Colonel Walker School, he said, would not be needed much before the summer holidays.¹

The School Board decided that the 240 students attending Colonel Walker School would be transferred to three nearby schools - Alexandra, Ramsay, and an apparently unnamed cottage school. None of the schools selected was located more than a mile from the home of any student transferred to it.

Mr. Foyle informed the meeting that a new, permanent building would be provided by the Provincial Government and made ready for use by or before the beginning of 1920.² The Minister of Education noted that technical education in North America was only in experimental stages, and that his department desired to "try out the ground first" in the temporary home of the Institute before "branching out on a permanent organization".³

Dr. Miller warned that the Institute should not undertake to duplicate the work done by the School Board, and

¹ The Morning Albertan, February 23, 1916.

² Ibid.

³ Ibid.

cautioned that too much should not be expected or attempted. He said that the work would be narrow at first but that it would be well done.

At the request of the Department of Education, the Calgary Public School Board arranged on April 27 a conference of representatives of the school boards, manufacturers, and businessmen of Calgary to secure information on local needs for specific types of technical education.⁴

Representative stationary engineers expressed a need for night classes for men in their trade. Commissioner Garden stated that there would be a greater need for night than for day classes. Mr. Short of the C.P.R. Ogden Shops pointed out that of 1,067 men engaged in the shops only 43 were receiving a limited amount of technical instruction. He suggested that arithmetic, elementary mathematics, mechanical drawing and design, and other technical subjects pertaining to the work done at the Ogden Shops be included in the Institute's curriculum. Mr. Short spoke of a keen interest expressed at the Shops in the establishment of the Institute, and predicted a good attendance of employees from the Shops at Institute classes. Mr. Glover, manager of the Cockshutt Plow Company, spoke of the need for instruction in business methods. Other suggestions included courses for

⁴ Ibid., April 28, 1916.

school teachers, soldiers, and plumbers; instruction in food service, sanitation, sewing, music, agriculture, and in various fields of professional engineering.

Mr. Massey of the Calgary Prevocational School outlined the work being done there and stated that twenty boys in the school were ready for advanced instruction of the type to be provided by the Institute.

Mr. William Aberhart, Principal of Crescent Heights Collegiate Institute, did not share the enthusiasm displayed by others regarding the Provincial Institute of Technology and Art. He expressed the opinion that the Institute would not appeal to many besides the alien born or the retarded.⁵

At the same time plans were being made for the re-training of returning disabled soldiers at the Institute.

At a conference on May 6 attended by representatives of the Provincial Committee of the Military Hospitals Commission and Mr. T. B. Kidner, Vocational Secretary of the Military Hospitals Commission, plans were completed for vocational training of Alberta's returned soliders.⁶

Dr. Miller was appointed to take charge of the Commission's re-training work in Alberta, a duty to which he was required, from May 1, 1916 to the end of that year, to devote

⁵Ibid.

⁶Ibid., May 6, 1916.

one-third of his time.⁷ He retained his duties as Director of the Department of Education's Summer School and in a much reduced capacity as Provincial Director of Technical Education.

Vocational training was to be made available by the Military Hospitals Commission for men whose disability at the time of their discharge was such as to make it impossible for them to continue work in their former occupations. Every case was to be studied by a small board of experts and careful consideration was to be given to each man's special needs, in view of his vocational experience and education, existing physical and mental condition, and his probable permanent condition. Also to be considered was his age, nationality, disposition, attitude towards life's problems, his own choice of a future vocation, and the demands for service in the employment field. With regard to these demands Dr. Miller considered it important to establish and maintain a consultative and cooperative relationship with professional, commercial, and industrial organizations.⁸

All expenditures necessary for the provision of vocational training for disabled soldiers and for the maintenance

⁷Report of the Work of the Military Hospitals Commission, Ottawa, Canada, May, 1917, page 114.

⁸Ibid.

of the training institutions under the control of the Military Hospitals Commission was to be paid by the Commission. An essential feature of the arrangement between the Province and the Vocational Secretary of the Hospitals Commission was the mutual desire of the two authorities to keep capital expenditure, for what was to be a temporary service, at a minimum.⁹ Accommodation and facilities were to be adjusted and extended consistent with the adequate provision of the service required. The payment for the expenditures was to be a matter of special arrangement from time to time between the Commission and Provincial Government through its Department of Education.

Hence, even before its establishment it was evident that the Alberta Provincial Institute of Technology and Art would for a time serve two groups — returning soldiers and maturing youth of the province.¹⁰

On July 25 the Department of Education issued a statement regarding the aim and scope of the Institute:

The organization and development of the Provincial Institute of Technology at Calgary must be based upon and intimately related to not only the existing educational system, but also to the commercial and industrial situation. One of the first duties of the principal

⁹Ibid.

¹⁰The Calgary Daily Herald, July 26, 1916.

and his staff must be, therefore, that of making a careful study or survey of the industrial situation and of the educational needs of the industrial and commercial fields in order that each school within the Institute may be organized in such a way as to render the greatest possible service.¹¹

The industrial survey was to be conducted with the assistance and co-operation of the various departments of the Provincial Government, the local school and municipal authorities, and the commercial and industrial organizations of the province.

In addition, the staff of the Institute was instructed by the Minister of Education to make a careful prevocational survey of all Alberta boys and girls between the ages of 14-18 years for the purpose of vocational guidance and educational adjustments.¹²

Other first-year duties of the staff outlined by the Hon. Mr. Boyle include the following:

The organization of the department of mining in the Institute on the basis of the need as found in the experience of the past two years in developing technical instruction in the mining centers;

The provision of such courses in the School of Trades and Industries of the Institute as the limited staff of the first year may be able to provide over and above those involved in the re-training of returned soldiers;

The provision of special classes for teachers of technical

¹¹ Ibid.

¹² Ibid.

subjects in Calgary, and where feasible the organization and supervision of similar special classes in the other cities of the province;

Developing lines of connection for the Institute with a view to its further organization in the autumn of 1917;

Arranging for the services of adequately qualified specialists to take charge of the various branches of instruction that such development may require;

Designing and making in the Institute itself much of the special equipment and furnishings needed for the various departments;

Selecting and making the necessary arrangements for securing the equipment and apparatus needed which cannot be made or secured locally.¹³

On September 14 at a conference attended by Dr. Miller, Dr. A. M. Scott, Superintendent of Public Schools; Dr. E. W. Coffin, Principal of the Calgary Normal School; and Mr. C. W. Fairn, Director of Technical Education for the city, detailed arrangements were made for the provision at the Institute of courses for teachers. The Technical Institute was to offer initial courses leading toward special certificate in art, manual arts, woodwork, household arts and physical training.¹⁴ It was decided that courses would be offered in the evenings and on Saturday mornings. A schedule of classes was to be prepared and distributed together with application forms through the courtesy of the city school administration to the

¹³Ibid.

¹⁴Ibid., September 16, 1916.

teachers of the city.

The courses to be offered would correspond to those given at the summer school for teachers and full credit was to be granted by the Department of Education for satisfactory completion of the courses.¹⁵ It was to be possible for teachers holding a Grade XI certificate to obtain a Grade XII or first class certificate.

Initial curriculum plans included carefully formulated two-year courses in the school of industrial education leading to mechanical, metal and woodworking trades.

The courses of instruction considered essential for each and all of these trades were subdivided into smaller units suitable for night class instruction, making it possible for students attending night classes over a period of years to cover a full program of courses.¹⁶

As originally planned, a course in the school of trades was to be of eight months' duration and include a core of subjects - mathematics, drafting and science - common to each of the trade courses. Gradually, however, mathematics and science were eliminated from the courses for the reason that the returned soldiers were to be trained for a particular job

¹⁵Ibid.

¹⁶Ibid., November 18, 1916.

in as short a time as possible. Stress was laid on practical work, with or without theory, and thus "the 'How' of the job was taught rather than the 'Why'."¹⁷

As originally organized by Dr. Miller the Institute was planned to comprise (1) a school of industrial education, (2) a school of fine applied art, (3) a school of domestic, science and household art, and (4) a school of commerce, all of which fell within the scope of the Institute as recommended by the Calgary College Commission in 1914.¹⁸

The planning of courses of instruction for the Institute, the first school of its type in Canada and the only publicly supported technical institute on the continent, was in all probability a very challenging assignment. There can be no doubt that the brief period that Dr. Miller had to organize the work of the Institute, the late appointments of some of the teaching staff, the dual control of the Institute by the Provincial Government and the Military Hospitals Commission, the inclusion of new, in some cases untried courses in the curriculum,¹⁹ the delayed deliveries of equipment, and the

¹⁷Dr. W. G. Carpenter, "Discussion of the General Question of the Program of the Institute from the Point of View of Professional Training as Against the Narrower Trade School Idea," unpublished paper, Alberta Provincial Institute of Technology and Art, Calgary, date of writing unknown, page 2.

¹⁸Dr. W. G. Carpenter, op. cit., page 2.

¹⁹The Calgary Daily Herald, November 18, 1916.

uncompleted industrial and pre-vocational surveys added greatly to planning difficulties.

Evidently undismayed, however, Dr. Miller predicted that given three years with reasonable support the Institute would astonish Western Canada.²⁰ He added that the first year would be one of organization; the remaining two would show results.

Mr. G. R. Dolan, Dr. Miller's chief assistant and formerly Principal of Calgary's Central Collegiate, sealed in outlining the proposed work of the Institute that one ambition of those in charge of the Institute was to arrange with the universities of Canada a plan whereby the first two years of university courses in mechanical, mining and electrical engineering might be taken at the Institute.²¹ It was proposed also to offer "subjects of interest and benefit to people in every walk of life, such as practical citizenship and elementary political economy."²² In view of item 4 of the recommendations of the Royal Commission stating that "the Institute shall not organize courses leading to

²⁰ The Morning Albertan, September 7, 1916.

²¹ The Calgary Daily Herald, October 21, 1916.

²² Ibid.

Engineering, Medical or other professional degrees....,"²³ the Provincial Government's firm stand against the offering of such courses at the Institute, and the many difficulties of curriculum planning growing out of the trying conditions in which the Institute found itself, such ambition at this time appears to be somewhat puzzling. It does point out, however, that the idea of the offering of university-level courses at the Institute had not disappeared with Calgary College.

II. COMMENCEMENT OF INSTRUCTION

Dr. Miller found little time for Institute matters while in Edmonton in charge of the summer school. Sufficient progress was made, however, during June and July in preparing the buildings and selecting instructors to make it possible for the staff of five specialists to report for duty September 1. Some delay was caused by the necessity to replace one of the floors of the fire hall and to practically re-install the heating plant.

By September 6 some preliminary work had been done in organizing a class for returned soldiers though the formation

²³ Report of the Commission on Calgary College, op. cit., page 14.

and the teaching of the class had not yet been authorized.²⁴

A number of veterans had been assisting "with great enthusiasm and success" in preparing the plant for instructional work.²⁵

The lower portion of the combined fire and police station was converted into an up-to-date machine shop, entirely by the efforts of the soldier students.²⁶ One of the first tasks of the machine shop students was to remove the bars from the prisoners' cells in order to accommodate the installation of various machines.²⁷ In addition to installing and adjusting for service a used lathe and drill, the trainees converted a gasoline engine into a gas-operated type for use as the power plant of the shop. It was intended at this time to install another lathe, a second drill and two forges.

An old auto and a motorcycle given to the shop provided further activity and learning for the enthusiastic students who would have worked twenty-four hours of the day had Dr. Miller let them.²⁸

The upper floor of the building was being fitted for

²⁴The Morning Albertan, September 7, 1916

²⁵Ibid.

²⁶Ibid.

²⁷Tech-Art Record, Yearbook of the Students' Association, Provincial Institute of Technology and Art, Calgary, 1952-53, page 7.

²⁸Ibid.

the accommodation of plumbing, sanitation, steam fitting, and woodworking departments. The premises were ready but the various machines had not yet arrived.

The problem of selecting suitable equipment for the Institute required careful and detailed attention. In the protection of public money it was necessary to secure competitive prices on all equipment before orders could be placed. This time-consuming procedure was aggravated by the slowness with which the deliveries of the equipment were made. In some instances, particularly with regard to the ordering of machine-shop and electrical equipment, it was found impossible to secure deliveries in less than two, four, and, in some cases, seven months. The delays resulted in the postponement of some day-course offerings to the autumn of 1917.²⁹

Extra-mural courses in all Grade XII examination subjects were begun in the latter part of September.³⁰ Arrangements were made whereby correspondence classes in the various subjects would be started not later than October 1. Many enquiries regarding the scope of the courses had been received, and it was decided by the administration of the Institute to send details of the courses to schools and school

²⁹The Calgary Daily Herald, September 16, 1916.

³⁰Ibid., September 21, 1916.

officials throughout the province.³¹

In October, the first month of the Institute's operation, courses in accountancy were arranged through the cooperation of the Institute and the Chartered Accountants' Students' Association.³² For several winters city students in accountancy tried through their students' organization to assist each other in their studying for accountancy examinations. An effort by the University of Alberta in 1915 to organize courses under its auspices failed, and now the students' association, supported by the Provincial Association of Chartered Accountants, arranged for a series of lectures at the Technical Institute.³³ Classes were to be held Monday evenings for students preparing for intermediate examinations and Tuesday evenings for students preparing for final examinations. The courses, consisting of lectures presented by local accountants and lawyers and Mr. James Fowler, a member of the Institute staff, were to commence October 24.

On October 1, 1916, the date of the official opening of the Institute, the enrolment of nonveteran day students consisted of five boys, recent students at the Calgary Prevocational

³¹ Ibid.

³² Ibid., October 21, 1916.

³³ Ibid., November 18, 1916.

School,³⁴ who enrolled in the two-year full-time course leading to the metalworking trades.³⁵ It remains a question as to what extent the participation of the Military Hospitals Commission in the Institute's operations affected the enrolment of nonveteran students.

The enrolment of partially disabled veterans was likewise at first small, consisting of six students enrolled in the eight-month full-time course in motor mechanics.³⁶

In addition to Dr. Miller and Mr. Dolan, the teaching staff of the Institute at the time of its official opening included Mr. James Fowler, B.Sc., M.A., formerly of Edinburgh University, whose duties at the Institute included the teaching of science and mathematics; Mr. W.A. Davidson, M.Sc., a graduate in mining at McGill University and supervisor of all instruction in mining for the province of Alberta, and who now was, as well, head of the Institute's mining department; Mr. L.H. Bennett, M.R.A.I.C., a qualified architect and a noted pioneer in the field of vocational education in Canada, who was placed in charge of building construction and woodwork; Mr. L.E. Pearson, the Institute's art instructor, whose

³⁴ Ibid., February 9, 1929.

³⁵ Ibid., November 3, 1916.

³⁶ Ibid.

experience in the art field included training as an art specialist in California, Minnesota, Chicago and New York; and Mr. C. A. Maus, who received three years of engineering training at the University of Toronto, and who was to instruct in motor mechanics and machine shop practice.³⁷

Within a few months the staff was augmented by the addition of Miss E. L. Davison, Mr. T. A. Hedley, Mr. Alex Higgins and Mr. J. H. Ross. In 1917 the number of staff members of the Institute grew to nineteen.

Approximately one month after the official opening date the total enrolment was 300 students including the eleven full-time day students.³⁸ Evening and Saturday morning classes were attended by 80 students of accountancy and 95 teachers receiving instruction in subjects which included art, sewing, woodworking and Grade XII examination subjects. Enrolled in correspondence courses were 150 students taking courses in coal mining, and 34 teachers receiving instruction in Grade XI and XII subjects.³⁹

Evening classes for veterans in commercial civil service work were organized and the enrolment in these classes

37

Ibid.

38

Ibid.

39

Ibid.

in November was fifteen.⁴⁰ Evening courses for veterans included instruction in sanitary work leading to examinations set by the Royal Sanitary Institute.⁴¹ Several of the students receiving such instruction had already received junior positions in the City's sanitary department. Instruction in sanitary work was to be broadened to include work preparatory for examinations in the inspection of nuisances, meats and foods, buildings and institutions.

Plans were under way also to provide courses of instruction in applied electricity and related science. Equipment required for the courses was expected to be in fairly complete supply by the new year. Because it was noted that so many occupations required some knowledge of electricity, popularity of the electrical courses was anticipated.⁴²

III. THE PREVOCATIONAL AND INDUSTRIAL SURVEY

At a meeting in the Labour Temple October 20, Dr. Miller outlined to members of the Trades and Labour Council the plans for the development of technical education and asked the Council for its advice and cooperation in the work of the

⁴⁰ The Calgary Daily Herald, November 18, 1916.
⁴¹ Ibid.
⁴² Ibid.

industrial survey.⁴³

The first step in the work, Dr. Miller informed the gathering, was to make a prevocational survey of boys and girls over age fourteen, whether they were in school or not, as it was necessary to know their vocational preferences. To learn the demands of industry, the quality of service demanded and the kind of training necessary, Dr. Miller asked that he and Mr. Dolan be given the opportunity to speak with officers of the different trade organizations.⁴⁴

The Institute's principal added that he and Mr. Dolan would consult employers of labour also and thus be able to "formulate an educational organization designed to enable boys and girls to take their place in the battle for life."⁴⁵

"As for the returned soldiers," Dr. Miller said, "a great many of them would not be fitted to take up their old vocations... and they would have to be trained for other occupations suitable to their conditions and which had an open door for them."⁴⁶

Mr. E. Roper, president of the Calgary T.L.C., assured

⁴³ Ibid., October 21, 1916.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

Dr. Miller and Mr. Dolan that the officers of the various bodies affiliated with the T.L.C. would be glad to meet with them and discuss the whole subject.⁴⁷

An announcement on November 18 regarding the proposed vocational survey included the statement that leading American cities such as Cincinnati, Philadelphia, Cleveland, Portland and Denver had carried similar surveys to successful completion. The information obtained by the surveys was "not only of great assistance in the organization of the courses..., but gave new vitality to evening classes, greatly increased their attendance; and drew the educational and municipal authorities more closely together for their mutual benefit."⁴⁸

Rapid progress in the work of the Institute-sponsored industrial survey was reported February 1.⁴⁹ Dr. Miller addressed trade, municipal and educational authorities in Lethbridge and Medicine Hat with the result that these cities decided, as had Calgary and Edmonton earlier, to appoint local advisory committees to co-operate with the survey staff.⁵⁰ The mailing list for productive and manufacturing industries, wholesale business and department stores in Calgary had also

⁴⁷Ibid.

⁴⁸Ibid., November 18, 1916.

⁴⁹Ibid., February 1, 1917.

⁵⁰Ibid.

been completed and the lists for Lethbridge and Medicine Hat were being prepared. In the work of the survey the administration of the Institute was assisted by a staff of twenty local educationalists and, where additional staff was required for the purpose of the survey, the Minister of Education directed that as far as possible the services of returned⁵¹ veterans be utilized.

Weeks later Dr. Miller announced that there was not a business in the province with which the Institute was not in contact, that the connections would be maintained, and that they would "prove invaluable, as the pupils would be trained so as to be of the utmost value to their employer, no matter what line of endeavor they chose."⁵²

The prevocational survey required by the Minister of Education revealed that many boys living in the cities wanted to farm. A large number of students wanted to study subjects such as music and housework, but only 275 students between the ages of fourteen and eighteen years intended to go on to university.⁵³ With regard to the latter point, it is of some interest to note that the population of Alberta in 1916 was

51

Ibid.

52

Ibid., April 21, 1917.

53

Ibid.

496,528.

The trade survey, in which the Military Hospitals Commission had particular interest,⁵⁴ showed that in many lines of business there was "little doing at present" but that in other fields such as gas engineering there was an excellent demand.⁵⁵ Mr. Dolan explained that an effort was being made to place the returned men into positions which would be congenial to them and which would obviate their dependence on pensions given them by the Dominion Government for their sustenance.⁵⁶

It would appear that the prospects for employment in industry were far from encouraging and the occupational aspirations of Alberta's youth far from ambitious. Of what immediate use the survey was to curriculum planning at the Institute may not have been determined, as no further reports regarding the survey were found in Calgary's two major newspapers. Mr. J. H. Ross, who joined the teaching staff of the Institute a few months after it opened and who later became Vice-Principal of the Institute, concluded that the survey "was never completed to the point of being of value."⁵⁷

⁵⁴Report of the Work of the Military Hospitals Commission, op. cit., page 118.

⁵⁵The Calgary Daily Herald, June 29, 1917.

⁵⁶Ibid., April 25, 1917.

⁵⁷Tech-Art Record, 1927-28, page 8.

IV. EXPANSION OF THE CURRICULUM

Notwithstanding the apparently doubtful benefits derived from the findings of the survey, the courses offered and the enrolment at the Institute continued to increase in number.

In response to many requests from business and professional men, an automobile owners' course for which several models of cars were procured, was planned in the first weeks of the new year.⁵⁸ Later in January arrangements for provision of a course in gas and steam engineering for partially disabled soldiers were completed through the co-operation of the Institute and the Military Hospitals Commission.⁵⁹ The course was to consist of a four-month period of instruction on stationary, tractor and auto engines; and a four-month period of instruction on steam engineering, with emphasis on the steam tractor such as was used in grain-threshing operations. Students taking the course were required, as were students taking any other trade course at the Institute, to take mathematics, physics, chemistry, electricity and drafting.⁶⁰ Through the

⁵⁸The Calgary Herald, January 13, 1917.

⁵⁹Ibid., January 26, 1917.

⁶⁰Ibid.

courtesy of local business firms whose operations were related to the trade courses, the Institute was to be provided, in addition to its own equipment, as many gas engines, tractors and auto trucks as were required for instructional purposes.⁶¹

Thought was given to the expansion of the art department also. Announcing that an art exhibit was planned for the coming autumn, Dr. Miller expressed the expectation that the Institute would become in time "the home of fine and applied art," and he intimated that arrangements would be made in the new permanent home of the institution for an art gallery.⁶² He added that music too would become a "very important feature" in the work of the Institute and hoped that space in the new home of the Institute would be provided for a natural history museum.⁶³

The enrolment of veterans at the Institute in April, 1917 shows a marked increase in day-class students and was as follows:⁶⁴

⁶¹Ibid.

⁶²Ibid., April 21, 1917.

⁶³Ibid.

⁶⁴Report of the Work of the Military Hospitals Commission, op. cit., page 114.

TABLE I

ENROLMENT OF DISABLED VETERANS AT THE PROVINCIAL INSTITUTE
OF TECHNOLOGY AND ART, APRIL, 1917

Mine Surveying (coal).....	1
Mine Examiner (coal).....	1
Mine Overman.....	1
Mine Manager.....	1
Land Surveying.....	1
Architectural Draughting.....	1
Building Inspection and Clerk of Works.....	5
Sanitary Inspection.....	2
Science of Moving Picture Operation.....	5
Gas and Steam Engine Operation.....	8
Automobile Mechanics.....	13
Electrical Working.....	2
Evening Class in English, Civil Service and Commercial Work..	13
<hr/>	
Total number of men.....	86

By January 5, 1918 evening courses for civilians included applied mathematics, applied drafting, practical electricity, preliminary and final accountancy, chemistry and physics for nurses, motor mechanics for men and women, and household arts.⁶⁵ At the same time the enrolment in correspondence classes for miners remained unchanged but the enrolment in correspondence classes for teachers increased from

⁶⁵The Calgary Daily Herald, January 5, 1918.

thirty-four early in November to seventy-five.⁶⁶ Twenty-eight women had applied for the course in motor-car operation.

Shortly after the end of its second academic year, May 31, 1918, the Institute was reported to have been serving 450 civilians and 150 returned soldiers in 15 different courses which included motor mechanics, gas tractor, applied electricity, applied mathematics, applied drafting, elementary science for nurses, accountancy, bookkeeping, household arts for teachers, and correspondence courses in Grade XI+ subjects and mining.⁶⁷ Other courses which by this time had been arranged for the re-education of partially disabled soldiers included vulcanizing, battery repair, heating-plant operation, power-plant operation, electrical-plant operation, railroad drafting, mechanical drafting and telegraphy. Up to March 31, 1918, a total of 246 disabled men had enrolled in courses at the Institute.⁶⁸

V. FEDERAL CONTROL OF THE INSTITUTE OF TECHNOLOGY AND ART

From the time that the Institute of Technology and Art was organized, all of its instructional facilities were placed

⁶⁶Ibid.

⁶⁷The Calgary Daily Herald, June 15, 1918.

⁶⁸Report of the Work of the Invalided Soldiers' Commission, Department of Soldiers' Civil Re-establishment, Ottawa, May, 1918, Appendix (h), page 105.

at the disposal of the classes of returned veterans. Between the latter part of 1916 and November 30, 1917 the Military Hospitals Commission assisted in the work of the Institute by providing instructors, equipment for telegraphy, ploughs, tractors, and automobiles.⁶⁹

Desiring to group the re-education cases of the province who wanted mechanical, technical or commercial training at one institution, in order to concentrate the effort for giving a thorough course of instruction in one place, the Commission took steps to increase its control and support of the Institute.⁷⁰

Mr. W. E. Segsworth, the Commission's Administrator of Vocational Training and Dr. Miller, who since January 1, 1917 had been devoting two-thirds of his time to the service of the Commission, drafted a plan suggesting an arrangement, effective from December 1, 1917, to centralize the work of the Institute "in a fully equipped and well-staffed institution."⁷¹

⁶⁹Ibid.

⁷⁰Report of the Military Hospitals Commission, op. cit., page 115.

⁷¹Memorandum Re Vocational Training of Returned Soldiers under Military Hospitals Commission in the Provincial Institute of Technology and Art, Calgary; Edmonton, Alberta, November 15, 1917.

The plan required that the day classes at the Institute be devoted entirely to the vocational training of returned soldiers and that the Military Hospitals Commission pay all the salaries of the staff (except the principal) concerned with the instruction of returned soldiers. As Principal, Dr. Miller was to be responsible to both the Commission's District Vocational Officer and the Department of Education. Three-fourth's of his salary was to be paid by the Commission and the remainder by the Department of Education.⁷²

By the terms of the plan the Provincial Government was to complete and pay for the gas and steam engine building, then under construction, but the Commission was to provide and maintain any other additional temporary accommodation or equipment needed. The existing plant was to be kept in repair and maintained by the Military Hospitals Commission. The Provincial Government was to have accommodation for teachers employed on correspondence instruction and the use of the Institute at night when it was not required for soldier training. Teachers employed on night work and correspondence work were, however, to be paid their salaries by the Provincial Government.

⁷²Ibid.

Though Mr. Boyle accepted the plan in total,⁷³ Mr.

Segsworth felt that some clarification of the plan was necessary, and pointed out that,

If we entered into the proposed arrangement, we would be using the Institute for practically full time, and to all intents and purposes it will become our Institute during the term of our occupancy. As we are to pay all the expenses in connection with our work there and also provide the heat and light for the Province while they are carrying on the work they are to do, it is only just that we should have control of the staff. I would suggest therefore that in accepting the arrangement, it be understood that the Military Hospitals Commission will appoint and make changes in the staff with the approval of the Educational Department.⁷⁴

Mr. Segsworth suggested further that, since additional equipment for use at the Institute would be necessary, an arrangement should be made with the Provincial Government,

...whereby they would take the equipment over from us at a valuation when we are through with it, or else make a definite arrangement by which we will pay half the cost of further equipment and the equipment be turned over to the Province when we are finished with it.⁷⁵

To the latter suggestion Mr. Boyle replied that the Provincial Government would be willing to take over any of the

⁷³Letter from Hon. Mr. Boyle to Mr. Segsworth, Edmonton, November 15, 1917.

⁷⁴Letter from Mr. Segsworth to Sir James Lougheed, President, Military Hospitals Commission, Ottawa, November 28, 1917.

⁷⁵Ibid.

equipment that would be suitable for the Institute if a valuation could be agreed upon between the two governments.⁷⁶ The Education Minister added that since the main building was owned by the Calgary School Board and the shop building by the City Corporation, it would be advisable to have the consent of the two local bodies before turning over control of the Institute to the Dominion Government.

Mr. Boyle's suggestions were accepted by the Military Hospitals Commission and it was understood that the agreement as made through correspondence between the two Governments would date from December 1, 1917, from which date the Commission would pay the staff engaged in teaching returned soldiers at the Institute.⁷⁷

The re-education of disabled soldiers became an increasingly large problem, however, as the men were returning from the Front in large numbers.⁷⁸ A great expansion of the Institute's educational service was required, and the arrangement made between the Hospitals Commission and the Institute late in 1917 proved inadequate in meeting the needs of the

⁷⁶Letter from Hon. Mr. Boyle to Hon. Sir James Loughheed, Edmonton, December 10, 1917.

⁷⁷Letter from Mr. S. A. Armstrong, Director, Military Hospitals Commission, to Mr. Boyle, Ottawa, December 29, 1917.

⁷⁸The Calgary Daily Herald, July 29, 1918.

Commission.

At a conference July 29, 1918 of representatives of the Federal and Provincial governments and the Calgary School Board, the Provincial Government agreed to hand the Institute over to the Department of Soldiers' Civil Re-establishment for a period of "two years beyond the time when terms of Peace are signed."⁷⁹ The Federal Government received from the Province all their right, title and interest in the Institute as well as their interest in the equipment, for which the former was to pay the Alberta Government 6 percent per annum interest on the capital invested by the Province of Alberta, and 10 percent per annum depreciation.⁸⁰ At the end of the two-year period equipment installed by the Alberta Government was to be returned less depreciation.

For the financial purposes of the agreement the suggested date for the transfer of the Institute to the Federal Government was August 31, 1918. Depreciation on the cost to the Provincial Government of equipment and alterations to the Institute buildings was to be applied from January 1, 1917; and depreciation on the new engineering shops constructed

⁷⁹Letter from Mr. W. E. Seysworth, Director of Vocational Training, Department of Soldiers' Civil Re-establishment to The Deputy Minister of the D.S.C.R., Ottawa, August 8, 1918.

⁸⁰Ibid.

in 1917 was to be calculated from January 1, 1918. The capital value of the Institute was fixed at \$72,892.43 less the total deductible depreciation of \$11,162.72. Thus the Federal Government was to make its interest and depreciation payments on the estimated capital value of \$61,729.71.⁸¹

The Department of Soldiers' Civil Re-Establishment agreed to secure some lots near the Institute and pay for the construction of temporary premises to accommodate a number of children who otherwise would have attended Colonel Walker School. Plans for the temporary buildings were to be prepared by the School Board and approved by the Department of Soldiers' Civil Re-Establishment. The temporary buildings were to be so designed that they could be converted into apartment houses or stores, or some such useful purpose and were not to cost more than \$15,000.00 to build.⁸² The buildings were to be returned to the Department when it vacated the Colonel Walker School.

Members of the original staff still at the Institute were returned to the Provincial Department of Education.⁸³ The transfer included Mr. J. F. Boyce, who in the previous

⁸¹Ibid.

⁸²Ibid.

⁸³Tech-Art Record, op. cit., page 8.

year succeeded Dr. Miller as Principal of the Institute. Mr. Boyce was replaced by Mr. L. F. Fyles, who, in turn, was succeeded in March, 1919 by the Vice-Principal, Mr. J. H. Ross.

It is of some interest to note that both Dr. Miller and Mr. T. B. Kidner left Canada to assist the government of the United States in the organizing of vocational educational programs for returned American soldiers. At an Inter-Allied conference held in London, England it was conceded that Canada had made more progress in looking after the vocational training of her disabled soldiers "than any other nation."⁸⁴ The American Government's interest in work done at the Institute was shown by a visit to the Institute in June, 1918 of a party of American educationists and later by an announcement from Washington that the American work "will practically duplicate the Canadian plan of operation."⁸⁵

The transfer of the Institute to Federal control had an almost immediate effect on the curriculum and enrolment. Evening classes for returned men were begun in September in general school subjects preparatory for civil service examinations and commercial work. Every eligible man was urged to take advantage of the courses which were provided free of

⁸⁴The Calgary Daily Herald, July 29, 1918.

⁸⁵Ibid.

charge. A month later the enrolment in these courses included approximately thirty civil service and about fifty commercial students.

As a result of the flu epidemic which broke out at this time, educational operations at the Institute were brought almost to a standstill for the remainder of the autumn.⁸⁶

During the night of October 18, 1918 the Calgary Board of Health issued orders for the closing of all churches and schools.⁸⁷ Meetings, dances, and loitering anywhere were prohibited; and poolrooms, cabarets, auction rooms, second-hand clothing and furniture stores, bowling alleys, and roller rinks were closed.

Negotiations between the Provincial Health Department and the Invalided Soldiers' Commission to use the Institute as a hospital began at once, the former body requesting accommodation for 30 beds, the latter for 150 beds. A telegram was sent by the Commission to Ottawa asking for permission to use the Institute as a hospital. Apparently an early reply was not received and on October 24 the Calgary Health Department seized the Institute under orders of the Provincial Department of

⁸⁶Tech-Art Record, loc. cit.

⁸⁷The Calgary Daily Herald, October 19, 1918.

Health, and put it to immediate use as a hospital.⁸⁸

The Province's action did not escape criticism, as Senator Lougheed called the move "rather high-handed" and argued that one of the public schools would have answered the purpose as well.⁸⁹

Classes were resumed November 25 and all subjects previously taught were to be offered, supplemented by one or two new courses.⁹⁰

The growing demand for the provision of vocational education for returned veterans necessitated a reduction in offerings available for the nonmilitary and nonveteran.⁹¹

The transfer of the Institute to Federal control and the progressive curtailment of civilian classes was sharply criticized in the press⁹² and in the Provincial Legislature.⁹³ Thus began again the struggle between citizens of Calgary and officials of the Province over the Institute of Technology and Art. The Minister of Education was again to receive from

⁸⁸Ibid., October 24, 1918.

⁸⁹Ibid.

⁹⁰Ibid., November 25, 1918.

⁹¹The Morning Albertan, January 3, 1919.

⁹²Ibid.

⁹³Ibid., February 21, 1919.

Calgary, deputations of citizens devoted to the aim of securing for that city a provincially supported technical institute.

Early in the new year a delegation from Calgary received little encouragement from Hon. Mr. Smith, the Minister of Education, who not only declined to resume the classes which had been discontinued but announced that further cancellations of offerings would be made at a very early date.⁹⁴ Premier Stewart stated that action on the Institute was being delayed because the Government could not quite figure out the exact function of such an institution, and did not care to embark upon any educational scheme which would mean overlapping the University.⁹⁵ Mr. Smith left the impression that the policy of the Government evidently would be to encourage technical education in the different high schools.

In the Provincial Legislature Dr. Blow introduced a resolution urging the Provincial Government "to take immediate action to resume the school."⁹⁶ The resolution precipitated "a long and somewhat deadly debate."⁹⁷

The Honorable Mr. Smith defended the Province's

⁹⁴ Ibid., January 3, 1919.

⁹⁵ Ibid.

⁹⁶ Ibid., February 21, 1919.

⁹⁷ Ibid.

relinquishing of the work of the Institute to the Dominion and stated that the more important work, such as the classes in mining and the work in accountancy and nursing was still being carried on. He contended that much of the work that had been done by the Institute was of an elementary nature⁹⁸ which should be the work of the high schools.

Mr. Smith announced that although there was some confusion over the scope of the Institute in future years, the standard of entrance should be low at first. "A conference would be held," he said, "as soon as the session closed at which representatives from the university, labor and other avocations would be called to discuss the entire situation."⁹⁹

Following Mr. Ross, who argued that the Department of Education should at the present time encourage vocational education in a modest manner wherever possible, Mr. Boyle stated that the Province agreed, when it turned the Institute over to the Federal Government, not to enter the field of vocational education until the Canadian Government gave up its re-training work, which would be completed in approximately another year.

He explained that the Dominion and the province either had to relinquish the work or the Dominion would have had to duplicate the plant which the province had. If

98 Ibid.

99 Ibid.

the province started now, it would have to duplicate the plant which already had been established.¹⁰⁰

On the second day of the debate discussion shifted to educational needs of the returning veterans. Premier Stewart made the statement that,

... it was the duty of the Canadian government, which had taken the men overseas to look to their education on their return. If the Canadian government did not undertake this work, the provincial government would not see the men denied their rights. If there is any great demand for technical training the province would undertake to see that it was given in the different schools.¹⁰¹

The Premier added that the Institute of Technology and Art would be a Provincial institute in every way; that work would be started as soon as possible and that the institute would be ready for occupation in the autumn of 1920.¹⁰²

Mr. Smith censured the opposition for its critical attitude, and hoped that no person was trying to make political issue out of the matter. He denied that the Institute of Technology had really been closed, restated the policy of the Provincial Government to encourage technical education in the high schools, and spoke of Lethbridge and Medicine Hat where he thought a start in providing technical education in the high schools could begin.

¹⁰⁰Ibid.

¹⁰¹Ibid., February 22, 1919.

¹⁰²Ibid.

At the end of the two-day debate Dr. Blow's resolution calling for the immediate resumption of classes and the various amendments to his resolution were withdrawn.

In the same week Premier Stewart told a delegation representing the Calgary School Board that work on the permanent Institute buildings would be started at once and that estimates of Provincial expenditures would include a grant for the beginning of such work. Mr. Smith added that the building would be ready for occupation in the summer of 1920.¹⁰³

Mr. H. A. Sinnott, chairman of the School Board said that the deputation, consisting of Mrs. Langford and trustees Sinnott, Selwood and Johnson, was quite satisfied with the promises of the Government that the building would be undertaken at a reasonable time.

Amid these reassuring prospects for a permanent Provincial technical institute opposition to the Federal take-over apparently subsided, and the soldier re-training program continued until late in the summer of 1920.

At this time the Department of Soldiers' Civil Re-Establishment notified the Alberta Department of Education that the D.S.C.R. would have no further use of the Colonel Walker School after September 30, 1920, and that the students

¹⁰³Ibid.

on the strength of the Department of Soldiers' Civil Re-Establishment on September 30, 1920 would be accommodated for training in industry and various outside schools apart from the Colonel Walker School.¹⁰⁴ Accordingly, on October 1, 1920 the Provincial Government regained possession of the plant and equipment of the Provincial Institute of Technology and Art.¹⁰⁵

¹⁰⁴Correspondence from Mr. G. S. Way, Chief of Information, Department of Veterans' Affairs, Ottawa, September 22, 1961.

¹⁰⁵Tech-Art Record, op. cit., page 9

CHAPTER V

PROVINCIAL REPOSSESSION AND THE QUESTIONS OF A NEW HOME AND CURRICULUM FOR THE INSTITUTE

I. FEDERAL SUPPORT FOR VOCATIONAL EDUCATION

It was observed in Chapter II of this study that sharply increased interest and participation by Canadian provincial governments in vocational education followed Federal financial support of such education. It has been shown also that the outbreak of World War I delayed implementation of the recommendations of the 1910 Federal Royal Commission on Technical Education, and that during World War I vocational education in Alberta suffered serious setbacks. It was noted that both the Government of Alberta and the City of Calgary displayed great reluctance and hesitation in establishing an institute of technology and art in Calgary until it became known that the Government of Canada would meet the costs of providing vocational education for disabled war veterans at such an institute, were one established. It is evident that the establishment of the Alberta Provincial Institute of Technology and Art was hastened in view of national needs and national support.

Scarcely had Armistice been signed when on November 22, 1918 the Canadian Education Association appointed a

delegation "to wait upon the Dominion Government regarding federal aid for the purpose of furthering technical education in Canada."¹ For this purpose the Association asked the Dominion Government to provide \$20,000,000² the difference, it is interesting to note, between the \$10,000,000 grant provided by the Agricultural Assistance Act of 1913, and Federal support in the amount of \$3,000,000 per annum for ten years recommended by the Royal Commission on Technical Education in 1913.

It seems, however, that the Federal Government needed no urging to proceed with its prewar plans to support vocational education. In May, 1919, notice was given in Parliament of a resolution calling for \$10,000,000 for technical education in the provinces over a period of ten years.³

The Act, passed later in the year, appropriated \$10,000,000, which was to be spent over a ten-year period ending March 31, 1929 under agreements with the provinces on condition that each province spend an amount equal to that spent by the Dominion, a requirement which was not

¹ The Calgary Daily Herald, November 22, 1918.

² Ibid., November 23, 1918.

³ Ibid., May 16, 1919.

included in the Agricultural Assistance Act of 1913.

Although the Federal Government did not attempt to exercise any administrative control over vocational education, it did assume responsibility "for seeing that Dominion funds were spent only for the purpose for which they were authorized," another condition not present in the 1913 Assistance Act. By the terms of the 1919 Act the Federal Government was to assist provinces or municipalities in developing vocational educational programs, "but only where advice and help in such matters were requested."⁴

The Technical Education Act of 1919 was designed to further the following types of education, all of which were at the secondary school level:

Industrial and technical courses, commercial courses, home economics courses, applied arts, prevocational courses of two or more years commencing not earlier than the seventh grade, part-time or continuation classes, evening classes, special short courses, in industry and for apprentices, foremen's courses, correspondence courses, and the training of vocational teachers.⁵

The 1919 Act made permissible the payment for rental or purchases of lands, buildings and equipment; maintenance of plant and equipment; Provincial administration costs

⁴ Vocational Education In Canada, op. cit., page 24.

⁵ Ibid.

for vocational education, and salaries and training of vocational teachers.⁶ The Act did not extend support to students under fourteen years of age, courses of college grade, or institutions owned by religious orders, or by private corporations or individuals. Further,

It was not intended that the Act should provide assistance for work already organized and established. Consequently all work of College grade, training of nurses and teachers and agricultural education were excluded from the benefits of the Act. The work of the elementary schools and the academic high schools, including Manual Training, were also excluded because they are not vocational and because they have been long established and provided for.⁷

Ten thousand dollars was to be granted to each province each year, and the balance of the annual allotment was to be divided among the provinces on the basis of population.

Governments of the provinces were required by the Act to submit quarterly statements of expenditures to the Dominion Department of Labor, which was charged with the administration of the Act through the Department's Technical Education Branch.

The Technical Education Act of 1919 stimulated the promotion and development of technical education in every

⁶ Ibid.

⁷ Carpenter, op. cit., page 2.

province of the Dominion.⁸ The increased activity in the provinces was shown by the passing of necessary legislation and provision of grants, and by the appointment of provincial directors of technical education.⁹

Thus the Federal Government had again come to the timely support of the Provincial Institute of Technology and Art, virtually on the eve of its repossession by the Government of Alberta.

II. PRELIMINARY PLANNING FOR THE INSTITUTE'S NEW HOME

Facilities and staff of the Calgary Provincial Normal School were moved from overcrowded temporary quarters to McDougall School in 1908. The new premises of the Normal School contained four classrooms, a library, an auditorium, offices, and eight practice-school classrooms. As student enrolments increased, however, practice-school facilities became greatly overburdened.¹⁰

In 1914, to alleviate the overcrowding, classrooms for practice-teaching purposes were obtained in Connaught

⁸ Alberta, Department of Education, Annual Report, 1920, Edmonton, page 125.

⁹ Ibid.

¹⁰ George Mann, "Alberta Normal Schools 1905-1945," unpublished Master's thesis, University of Alberta, Edmonton, 1961, page 34.

and Sunnyside schools. In the following year the attendance at the Normal School rose sharply from 262 students in 1914 to 345. One of the practice rooms in the Normal School was transferred to an unused church building on Fifth Street West so that the vacated room could be used as a science room.¹¹

In view of the need for a larger Normal school, the renewed demands in 1918 for an institute of technology, and the financial support available from the Dominion Government for vocational education, the Government of Alberta extended repeated assurances for an early start on a new combined Normal School and Institute of Technology.

An announcement on May 29, 1919 stated that the Calgary Public School Board and the Minister of Education agreed on a valuation of \$210,000 for the existing Normal School, the Board's intention being to purchase the building for use as a public school.¹²

In the following month Hon. George Smith, Minister of Education, revealed that he expected the selection of the site for the combined Normal-technical school to be made within the next few days and that steps would be taken

¹¹ Ibid., page 41.

¹² The Calgary Daily Herald, May 29, 1919.

at once "for the preparation of final plans, in order that a beginning may be made on the excavation and foundation work in the autumn."¹³

The Minister continued to say that four locations for the new building had been suggested but that some differences of opinion had developed among educationists in Calgary as to which of the suggested sites would prove to be most desirable from a long-range viewpoint. "The requirements of the Calgary School Board have to be taken into account," said Mr. Smith, "as ten grades of the public schools, including two high school grades are to be accommodated in the Normal School building..."¹⁴ He added that the technical institute would be located on the new site in close proximity to the Normal School in order to make possible a "substantial saving on equipment and operation... it no longer being necessary under such a plan to duplicate certain portions of the plant."¹⁵

Four sites for the Normal School and the new home of the Institute were considered: the McArthur site consisting of twenty acres on the plateau on the north

¹³ Ibid., June 18, 1919.

¹⁴ Ibid.

¹⁵ Ibid.

side of the Bow River and extending from First Street West to Fourth Street West; the Riley site, directly north of Riley Park; the Jackson site, adjacent to the municipal golf grounds; and the Walker site, in the vicinity of the original location of the Institute.¹⁶

Of the Jackson site, known also as Shaganappi Park, Dr. Blow, M.L.A., stated that "there is no other site in Calgary that in any way is equalled The beautiful curve on the river and the beautiful landscape and elevation is unsurpassed.." ¹⁷ He pointed out that two-thirds of Calgarians lived on the south side of the Bow River and predicted that future development would be chiefly to the south and west. He concluded that,

The future of this city will demand university education and I believe that it is absolutely essential to select at least three hundred acres in order to permit of expansion in the future.¹⁸

The Minister of Education ruled out the Jackson and Walker sites in view of the necessity to locate the Normal School within easy access to the children attending its practice rooms, and he considered the McArthur site

¹⁶ The Morning Albertan, July 3, 1919.

¹⁷ The Calgary Daily Herald, June 26, 1919.

¹⁸ Ibid.

too limited in area.¹⁹ Deeming the Riley site suitable, the Hon. Mr. Smith thought it to be splendidly located and that it provided a "very impressive approach."²⁰ He continued,

The buildings will face Tenth Street, sloping well to the east, which is desirable and permit of very picturesque terracing at very little expense. The property is elevated well above the street. We can get a very nice layout for the buildings.

The property permits of intensive agriculture, which will be required for our purposes.²¹

The Provincial Government was to pay \$63,000 for a 110-acre parcel of the Riley property but the part of the site on which the Normal School and technical institute was actually to located was to be a gift from Mr. Riley to the Province.²²

Mr. Smith felt that little could be done in making a start on the erection of the building in the remainder of the year. He said that the Department of Education had no architects' branch, and that the regular department was loaded with an "enormous amount of work."²³ The

¹⁹ The Morning Albertan, July 3, 1919.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Ibid.

Minister explained that the "regular department" was busy planning the Medicine Hat courthouse, the extension to the Ponoka asylum, the new agricultural schools and other public buildings. He left the impression, however, that work on the planning of the new institute was progressing by announcing that he intended to "go east in a few weeks to make a careful study of similar institutions."²⁴

During his visit in Ontario Mr. Smith hoped to secure a new director of technical work who was probably to become the principal of the new institute when completed in 1920.²⁵ Accompanied by Provincial Architect Blakey, the Education Minister expected to visit technical institutes, Normal schools and institutes for the feeble-minded. Perhaps more significantly Mr. Smith hoped to "negotiate an agreement with the Dominion Government regarding the Dominion grants-in-aid of technical education and discuss with the federal ministers the handling of school lands and the trust funds in connection therewith."²⁶

In a letter to Calgary's Mayor Marshall, Premier Stewart expressed uncertainty surrounding the future

²⁴ Ibid.

²⁵ Ibid., August 5, 1919.

²⁶ Ibid.

institute of technology. The Premier expressed the possibility that a beginning could be made on the Normal School in the coming winter, but he did not think that a start could be made on the school of technology as plans for the kind of instruction to be given and the type of building required had not been completed.²⁷ He spoke also of the scarcity of labor and of the difficulty the labour bureau was having in trying to meet the many requests for workmen. The Premier's description of the employment situation, however, appears in sharp contrast to a newspaper article a few months earlier stating that unemployment in Calgary was serious, that war veterans were out of work, and that the outlook was bad.²⁸

III. THE QUESTION OF THE INSTITUTE'S FUNCTION

About a week after public disclosure of the Premier's statements, Mr. D.A. Campbell, B.A., newly appointed Director of Technical Education, announced that the Minister of Education intended to call a conference at Edmonton at an early date to discuss the scope of the curriculum of the Institute of Technology. Mr. Campbell stressed the need for more technical education. He stated that in Alberta's

²⁷ Ibid., November 4, 1919.

²⁸ Ibid., August 2, 1919.

public schools technical education was being provided only in Edmonton, Calgary, Canmore and Cardston, and that the lack of technical education in Canada was hurting Canadian industry.²⁹

Calgarians asked to attend the conference were Mrs. Langford, Mrs. Carse, and F.S. Selwood representing the Calgary School Board; Mr. Alex Ross, M.L.A.; Alderman Fred White, representing the provincial labor organizations; and Captain L. Johnson, District Vocational Officer of the Military Hospitals Commission, whom the School Board asked to accompany its representatives to the conference. Others attending the meeting included John Ross, Deputy Minister of Education, President Tory of the University of Alberta, Messrs, McNally, Campbell, Pearson and Blaikie of the Department of Education; Mr. Hanna, representing the society of engineers; and Mrs. Lewis, "factory inspector."³⁰

Honorable George Smith informed the conference that the Provincial Government was considering two plans regarding the work of the Institute. One was that the Institute would do a considerable amount of work of a technical high school, and in that case work in co-operation

²⁹ Ibid., November 13, 1919.

³⁰ Ibid., November 18, 1919.

with the Calgary School Board; the other that the Institute would be operated in connection with the Normal School "until it was determined what demand there was in the province for the institute and the people it might serve."³¹

Mr. Alex Ross, Deputy Minister of Education, stated that in the latter plan only a moderate expenditure would be involved at the beginning. He advised that until the Institute developed, instruction should be given in "mining, agriculture, education of teachers in manual and domestic arts, and something in the way of re-education of people who desired it."³²

Hon. Mr. Smith assured those present that the Government was very desirous of "keeping faith with Calgary" and that the only difficulty in the way of further progress on the Institute was ascertaining clearly the demand for its work.³³

It was decided that another meeting was necessary and that it would be held in the near future in Calgary.

The Minister's suggestion that the Institute do

³¹ Ibid.

³² Ibid.

³³ Ibid.

the work of a technical high school brought an immediate reaction in the Calgary press. In strong opposition to the suggestion an editorial read in part,

The people of Calgary would inform the minister that the institute must be one of advanced learning, provincial in scope, which will be an important part of the educational equipment of this province.

We want a real educational institution and we want it soon. We do not expect that it shall be born in a day, but a start must be made at once.³⁴

At the second meeting several days later Mr. Smith stated that he was prepared to drop at once the plan by which the Institute was to serve Calgary as a technical high school. He announced that there could be no ultimate decision then on the scope of the Institute's work but that something had to be done about a start on the Institute itself. He said further that the architect's branch was now not busy and that,

On Monday morning next, beginning at nine o'clock the provincial architect will begin work on plans for the Institute of Technology to be located in Calgary, and not to stop until the work is completed.³⁵

In referring to the recommendations of the Commission on Calgary College, Mr. Smith noted that whereas one recommendation was that the Institute should be provincial in scope, another was that the Institute should be financed

³⁴ Ibid.

³⁵ Ibid., November 22, 1919.

partly by the City of Calgary and partly by the Province. He thought that these recommendations were confusing and added that if the Institute was to be provincial in scope, it should be financed exclusively by the Province.³⁶

Mr. W.M. Davidson, M.L.A., brought to the Minister's attention the decision made by the Province in 1916 that the Institute was to be provincial in its scope and that the Province should bear the full financial responsibility of the school. Mr. Smith said that he was not aware of the decision as it had been made before he joined the Government, and that had he known of it, he would not have considered the plan by which the Institute would co-operate with the high schools.³⁷

IV. THE REALIZATION OF A NEW HOME FOR THE INSTITUTE

The architect's plan of the combined Normal School and Institute of Technology called for a three-story modern structure of brick with stone trimmings consisting of two wings with a central connecting section. One wing was to accommodate about two hundred Normal school students; the other wing to accommodate, ultimately, the same number

³⁶ Ibid.

³⁷ Ibid.

of technology students. The central section was to house a big gymnasium, a library and an assembly room to be used in common by students at both institutions.

The workshops were to be erected in the rear portion of the building in such a manner that noise from them would not interfere with the work of the students in other sections of the main building.³⁸

The estimated cost of the building was \$500,000³⁹ but tenders received ranged from \$684,704 to \$1,024,054.⁴⁰ Premier Stewart announced that in view of greatly increased costs of building, changes in the plans of the building would possibly be necessary to lower costs to a maximum of \$600,000. The Premier added that the next sale of Provincial debentures would determine whether money would be available for the undertaking. He offered the "abnormally high costs" of building as the only reason for possibly delaying work on the Institute and stated that the Provincial Government was disposed to wait until the scale of building costs came down, an eventuality

³⁸ The Calgary Daily Herald, January 24, 1920.

³⁹ Ibid.

⁴⁰ Ibid., April 23, 1920.

which he thought another year would at least bring into sight.⁴¹

Late in the summer, as the enrolment at the Normal School exceeded all previous records,⁴² tenders were again invited. Hopes for substantial reductions in cost estimates were not realized, but the Government decided to make some progress in the erection of the combined institution" in spite of unfavorable conditions."⁴³

The tender accepted was that of Thomas, Jamieson and McKenzie of Calgary in the amount of \$157,000, the lowest of six bids submitted. The amount was to cover the erection of the workshops only, which was to be used as temporary quarters for the contractors during the construction of the main building.⁴⁴ The excavation for the main building was also to have been done in the fall of 1920 but under a separate contract. It was the intention of the Provincial Department of Public Works "to begin on the workshop contract at once."⁴⁵

⁴¹ Ibid.

⁴² The Calgary Daily Herald, September 11, 1920.

⁴³ Ibid., September 10, 1920.

⁴⁴ Ibid., September 28, 1920.

⁴⁵ Ibid.

But delay in making a start on construction of the building continued. Late in December parliamentarians Alex Ross and W.M. Davidson acted as a delegation on behalf of the city of Calgary to request before the Provincial Government that it take a hand in alleviating the unemployment situation in Calgary where some 1500 men were idle.⁴⁶ Premier Stewart suggested the possibility of arranging at once for the beginning of the excavation work for the new home of the Institute, thus furnishing employment for some of the men on relief. The project was expected to qualify for Federal aid to the extent of one-third of the cost of relief for the men employed. The grant was to be given out on a cash basis on the condition that the local authorities undertake the balance.⁴⁷ No contract up to this time had been awarded for the excavation of the basement for the building.

Early in the following year the Provincial Government accepted the City of Calgary's figures for the excavation work,⁴⁸ and so in January, 1921 began the construction of the combined Normal School and Institute of Technology and

⁴⁶ Ibid., December 27, 1920.

⁴⁷ Ibid.

⁴⁸ Ibid., January 18, 1921.

Art, the institution which was to be ready for operation in the summer of 1920.

On June 15, 1922 the offices and equipment of the Institute of Technology were moved from the old quarters in Colonel Walker School to the new building then still under construction,⁴⁹ and in the following fall the Institute began work in its new home.

⁴⁹ Alberta, Department of Education, Annual Report, 1922, page 95.

CHAPTER VI

PROVINCIAL REPOSSESSION TO ECONOMIC DEPRESSION-- A PERIOD OF TRIAL AND GROWTH OF THE INSTITUTE

I. REOPENING THE INSTITUTE

On October 1, 1920 the Provincial Government gained complete control of the Institute of Technology and Art. The Institute's mechanical and scientific equipment valued at \$40,000 was turned over to the Provincial Department of Education. The Department received also permission from the Calgary Public School Board and the commissioners of the City of Calgary to use for technical educational purposes Colonel Walker School and the adjacent buildings in which the equipment was installed.¹

Mr. D.A. Campbell, appointed Provincial Director of Technical Education in the previous year, was placed in charge of all arrangements for the Institute's reopening. As Director of Technical Education Mr. Campbell was responsible directly to the Minister of Education.

The continuing operation and the revised curriculum

¹ Alberta Provincial Institute of Technology and Art, First Annual Announcement, Calgary, Alberta, 1920, page 1.

of the Institute were publicized through the distribution of posters and announcements, and the placing of display advertisements the newspapers of all urban centers in the province.²

The appointment between October 1 and November 1 of a nucleus staff included Mr. J.H. Ross, who resumed duties as acting principal and shop director.³ Mr. Leo Pearson was reappointed to the Institute staff as registrar and art instructor. The balance of the nucleus instructional staff comprised Mr. C.C. Richardson, B.Sc., supervisor of mining instruction; Mr. Robert Dingwall, A.R.T.C., supervisor of steam engineering instruction; Mr. Robert Gendall, instructor in applied electricity; Mr. T.A. Hedley, instructor in tractor engineering; and Mr. C.A. Choate, instructor in motor mechanics.⁴

On November 8, 1920 the doors of the Institute were again opened to civilian day students. In spite of the publicity regarding the reopening of the Institute to these students, the number registered for full-time day classes

² Alberta, Department of Education, Annual Report, 1920, page 138.

³ Tech-Art Record, op. cit., page 9.

⁴ The Calgary Daily Herald, November 10, 1920.

was only twenty-one.⁵ Enrolments on the same day consisted of 8 part-time, 105 correspondence, and 146 evening-class students.⁶

By January 15, 1921 the overall enrolment had grown to include 75 full-time day students, 22 part-time, 185 correspondence, and 164 evening-class students, making a total enrolment of 446 in all classes.⁷

On reopening, the Institute's curriculum consisted of courses in railway, architectural and mechanical drafting, steam, mining, motor, tractor and electrical engineering, armature winding, machine shop practice, and applied mathematics.⁸

Special courses for teachers in manual training, household economics, art and commercial work were offered, but due to lack of demand for them they were not given. For the same reason courses in accounting for candidates working towards their Chartered Accountants' degree did not get underway in the 1920-21 term.

⁵ Tech-Art Record, loc. cit.

⁶ Alberta, Department of Education, Annual Report, loc. cit.

⁷ Ibid.

⁸ Alberta, Department of Education, Annual Report, loc. cit.

Mr. Campbell expressed optimism regarding the Institute's future. He observed that the demand for skilled men with technical education was emphasized by "the world-quaking events of the past few years," and by the thousands of returned men who "became efficient in various lines through short intensive courses in the school in Calgary and in similar schools throughout Canada." ⁹

II. FURTHER DELIBERATIONS ON THE SCOPE OF THE INSTITUTE'S CURRICULUM

The formal opening of the new building on January 23, 1923 featured speeches praising the institution for its great value as an educational center and its contribution to the beauty of North Hill.

Of particular significance, however, was the revival of the question of the Institute's curriculum.

A statement made at the opening ceremony by Hon. Perren Baker, Minister of Education, regarding the scope of the curriculum of the Institute was interpreted by Mayor George Webster of Calgary to mean that the Provincial cabinet "was considering giving to the people of Calgary

⁹ Provincial Institute of Technology and Art, First Annual Announcement, op. cit., 1920, page 3.

some of the benefits, at least, of higher education, which now could only be obtained in Edmonton."¹⁰ Continued the Mayor:

May I respectfully suggest to Premier Greenfield and colleagues that this development be started at once, so that the children of Calgary and the southern part of the province may have an opportunity to take advantage of at least part of the higher education.¹¹

On February 5, 1923 citizens of Calgary gathered in the Board of Trade rooms to discuss "the future of the Institute of Technology and Art on the North Hill."¹² Mr. W.M. Davidson, M.L.A., outlined the negotiations which had taken place in previous years to secure an institute of higher learning for Calgary. Mr. J.H. Ross, Acting Principal of the Institute of Technology, spoke of the work carried on at the Institute. After a "large number" of those present had expressed opinions on the matter of the Institute's curriculum, a committee was appointed "to investigate the situation as it affected the Institute of Technology, to formulate recommendations and to report back to another mass meeting on Saturday afternoon, February 16..."¹³ The

¹⁰ The Calgary Herald, January 13, 1923.

¹¹ Ibid.

¹² Ibid., February 5, 1923.

¹³ Ibid.

committee consisted of Mr. F.E. Osborne, chairman; Dr. A.O. MacRae, Dr. T.H. Blow, F.S. Selwood, T.B. Riley, Miss Foote, P.H. O'Reilly, and Charles O. Smith.

The consensus was that "provision should be made so that Calgary could give at least a two years' course in arts" at the Institute.¹⁴ Mr. Davidson claimed that the Institute was not doing the work that it had been hoped it would, nor the work that had been suggested by the Commission, and that "work was being done at the Institute that any high school could handle."¹⁵

Mr. Ross disagreed, explaining that the courses were similar to those given by the agricultural colleges, and that none of the courses at the Institute followed high school work or led to university. He pointed out that the work of the Institute was designed to prepare a student for a particular trade with the possibility of his becoming a foreman or superintendent, owing to the training received at the Institute.¹⁶

The Acting Principal explained further that the Dominion Government provided a grant amounting to fifty percent

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

of the cost of maintenance and of capital expenditures to a fixed maximum strictly on the condition that the Institute not set an educational prerequisite for entrance.

The resolution was nevertheless put to the meeting and carried unanimously.¹⁷

At the second Saturday meeting the four Calgary M.L.A.'s--Fred J. White, R.C. Marshall, W.M. Davidson and Robert Pearson--were instructed "to assert Calgary's right to a two-year university course in arts and technology" before the Provincial Government.¹⁸ The following recommendations were among those adopted without a dissenting vote:

That the work now being done at the school be approved and that public support be enlisted to make its advantages more widely known.

That a two-year university course in advanced technological work be provided.

That a two-year university course in arts be provided by September 1.

That the citizens of Calgary boldly assert the city's right to higher education in arts, science and technology, that the two-years' course apply on further work for degrees; that the scope of the work here shall ultimately include full degree standing, either separately or in affiliation with the University of Alberta.¹⁹

¹⁷ Ibid.

¹⁸ Ibid., February 19, 1923.

¹⁹ Ibid.

The Provincial Government turned down the recommendations. Premier Greenfield said that primary education must be the first concern of the Province, and he quoted confidential figures to the Calgary members showing that the cost of higher education in Alberta "had risen out of all proportion to that of primary education." ²⁰

Honorable Perren Baker expressed the view that he never expected to see a university in Calgary unless the population of the province increased much more rapidly than he had any reason to expect it would. He suggested that the Provincial Government "might turn over the entire technical plant to the Calgary high school administration as the city was badly in need of additional high school facilities." ²¹

The Ministers held out "absolutely no hope" to the Calgary members, who left the conference "much depressed." ²²

Thus after eight years of controversy between citizens of Calgary and the Provincial Government, efforts of the former towards the inclusion of courses of university grade in the Institute's curriculum came to an end. Evidently the curriculum had already been determined by

²⁰ Ibid., March 10, 1923.

²¹ Ibid.

²² Ibid.

Provincial authorities and was not, as Mr. Ross described it, one in which the courses followed high-school work or led to university, but one which prepared a student for a particular trade.

Whatever the need for university-level courses in Calgary might have been, Calgarians were now apparently convinced that the Institute of Technology was not intended to offer them. The Provincial Government's inexorable stand against a second university for Alberta and the influence of Federal support for vocational education had resulted in the establishment of an educational institution not inside the existing educational stream, but supplementary to it.

III. INDUSTRY AND VOCATIONAL EDUCATION IN ALBERTA

When the Institute of Technology first opened its doors in 1916, Alberta's population included a large body of citizens whose efficiency at their occupations could be improved by industrial and technical education. Already the Province's urban population constituted almost one-third of the total.²³

In 1917 the value of the products manufactured in the Province equalled \$71,669,423.00. The industries required 11,524 employees. The total production of

²³ Alberta, Department of Education, Annual Report, op. cit., 1920, page 131.

coal was 6,148,620 tons, of coke 32,858 tons, of briquettes 100,470 tons, of natural gas 6,318,389,000 cubic feet. The transportation system of steam railways totalled 4,273 miles. The wires of the telephone system amounted to 156,579 miles.²⁴

Coal mining, a hazardous occupation and an industry on which nearly all Alberta industries were dependent, had a special need for scientific and technical education to ensure the safety of the miners and efficient and economical production of coal.²⁵

The need for instruction in steam engineering was also evident. In 1920 power and light for Alberta cities and towns, mining centers, industrial and manufacturing establishments was provided by 740 stationary boilers located in 336 power plants.²⁶

On farms the conversion from animal to steam and gasoline power resulted in a greater use of machinery in farming than in the manufacturing industries.²⁷ Since the farmer lived an isolated life and perhaps many miles from a mechanical repair shop, technical education in farm mechanics was for him a matter of great importance.

²⁴ Ibid., pp. 131-132.

²⁵ Ibid., page 131.

²⁶ Ibid., page 129.

²⁷ Ibid., page 134.

Similarly, technical education was in growing demand in fields of transportation, communication, building construction and the very rapidly advancing field of electricity.

Young men who sought to equip themselves for more effective work in Alberta's diversified industries were being compelled, however, to invest heavily in foreign correspondence courses and pay large fees to private technical schools.²⁸

By 1920 the acknowledged need for vocational education in Alberta was being met by the Provincial Government in a number of ways. In addition to the provision of such education at the Institute of Technology, less advanced vocational education was being given in day and evening classes at public and high schools. Also at these schools instruction in vocational education was available for teachers intending to instruct in that field. Vocational classes were being operated at night schools throughout the Province by local school boards, assisted by Provincial grants and by the instructional facilities of the Institute of Technology. The Institute was providing, as well, extension courses in steam and mining engineering.

²⁸

Ibid., page 132.

IV. ESTABLISHMENT OF ADVISORY COUNCILS AT THE INSTITUTE OF TECHNOLOGY AND ART

The established policy of maintaining lines of connection with industry was continued. In its first annual announcement the Institute invited enquiries about courses and applications for them from superintendents, foremen, managers, employers, and from young men entering or working in all fields of industrial effort in order to more accurately ascertain the Province's needs in technical and vocational education.²⁹

Mr. W.G. Singer, Secretary Western Association of Mechanical and Stationary Engineers, Redcliff, and Mr. Robert Morton, General Secretary, Canadian Brotherhood Stationary Engineers and Firemen, Calgary, had willingly cooperated to enable announcements of the Institute of Technology to reach all members of their associations. Valuable suggestions were received from these organizations.³⁰

In 1922 Mr. Campbell, Provincial Director of Technical Education, recommended to the Department of Education

²⁹ Provincial Institute of Technology and Art, First Annual Announcement, *op. cit.*, page 4.

³⁰ Alberta, Department of Education, Annual Report, *op. cit.*, page 129.

that a "survey" be made of the Province by the members of the Institute staff during the summer vacation. The purpose of the survey was to provide the Institute with first-hand knowledge of industrial conditions in Alberta and to distribute posters advertising day and correspondence courses at the Institute.³¹ In the following year Mr. Campbell recommended that provision be made each year during the vacation period to release some members of the staff from special duties so that they could re-enter industry and so acquire first-hand knowledge of latest developments.³² In the summer of 1924 Mr. Fowler, head of the science department, spent two months in the chemical department of the Imperial Oil Refineries in Calgary.

These lines of connection with industry were evidently considered at the Institute, and by the Province, to be inadequate.

In an address to a group of business and professional men in the Board of Trade rooms in Calgary, Hon. Perren Baker, Minister of Education, stated that the Department was considering the appointment of a local advisory board in Calgary to assist the staff of the Institute in its

³¹ Ibid., 1922, page 96.

³² Ibid., 1923, page 94.

efforts to relate instruction to the needs of the province.³³

A beginning in the establishment of advisory boards was made in 1926. A program of evening-class instruction for apprentice plumbers was arranged in cooperation with a committee composed of two appointees from the Plumbing and Heating Engineers' Association and two from the Union of Journeymen Plumbers.³⁴ In 1928 the evening class for plumbers' apprentices was extended following consultation with the Master Plumbers' Association and the Brotherhood of Plumbers and Steam Fitters. Under the new arrangements the apprentices were given instruction at the Institute two evenings and a Wednesday afternoon each week at the expense of their employers. In the same year a similar plan of instruction for other building trades was being formulated by a committee of the Builders' Association and the Builders' Union.³⁵

V. THE CURRICULUM

Nature of the Curriculum

The general nature of the Institute's curriculum was

³³ The Calgary Daily Herald, January 4, 1924.

³⁴ Alberta, Department of Education, Annual Report, op. cit., 1926, page 57.

³⁵ Ibid., 1928, page 66.

determined by the terms of the 1919 Technical Education Act, but the Province's Department of Education was permitted by the Act to arrange the Institute's courses subject to Dominion approval.³⁶

Eligibility for grants under the 1919 Technical Education Act necessitated the abandonment of the desire to include junior engineering courses in the Institute's curriculum. The type of work done at the Institute under the Department of Soldiers' Civil Re-establishment, however, was encouraged and developed.³⁷ Hence on reopening under Provincial control, the Institute offered an essentially unchanged curriculum. The overall aim of the curriculum--that it meet the immediate needs of the students in attendance, and that it have a direct application to their chosen occupations--was likewise unchanged.³⁸

All courses, however, were to be rounded out by instruction in related subjects in order to equip the student with a broader training which would be of "most economical" value to him.³⁹ In 1921 to shopwork and theory were added

³⁶ Ibid., page 1.

³⁷ Carpenter, op. cit., page 2.

³⁸ Provincial Institute of Technology and Art, First Annual Announcement, op. cit., page 2.

³⁹ Ibid., page 3.

mathematics, drafting, physics and chemistry, courses originally planned for the Institute's curriculum but trimmed from it in 1917 by Federal authorities. English was added in 1922 and the inclusion of a course in industrial history was planned for the following year. Related courses were not permitted, however, to interfere with the allotted 50 percent of shopwork which was considered at the Institute as essential to a vocational course.⁴⁰

The principle of devoting half-time to shopwork and half-time to related work was established early in the development of the Institute. "It is this happy combination of shopwork," wrote Dr. Carpenter, who in 1924 became Principal of the Institute, "that accounts for any success that has attended the work of the Institute in the field of vocational education."⁴¹

Day Courses

The length of the regular school day in the 1920-29 period was six hours of which a minimum of three hours was devoted to shopwork. In length the terms ranged from three weeks to eight months. The longest courses consisted of two eight-month terms. The lengths of courses and the growth of

⁴⁰ Alberta, Department of Education, Annual Report, op. cit., 1922, page 93.

⁴¹ Carpenter, op. cit., page 3.

the day curriculum and enrolment are summarized in Table II, page 144.

Each year the Institute offered to organize a number of courses, in addition to those already established, if sufficient enrolment in them was obtained. An eight-month course in art, a six-month course in motion picture operating, a two-month course in acetylene welding, an eight-month course in manual training for teachers, an eight-month course in machine shop practice, a six-month course in vulcanizing, and a three-weeks course in farm machinery were offered in 1921.⁴² By 1929 instruction was being given in all of these courses excepting motion picture operating and vulcanizing.

The engineering and drafting courses, industrial dressmaking and millinery, and telegraphy (railroad station agents' course) contained a somewhat common core of subjects: physics, chemistry, mathematics, and English. It should be noted that the term "engineering" was used in a general sense and must not be confused with the term as applied to university-level courses.

The specific aims of the day course clearly indicate that the purpose of the Institute was not only to prepare

⁴² Provincial Institute of Technology and Art, Annual Announcement, 1922, page 11.

TABLE II

ENROLMENTS IN DAY CLASSES 1920-1929
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Course	Length of Term	Number of Terms	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Armature Winding	8 months	1	3*	3	27	34	21	21	26	15	28	
Battery and Ignition	5 months	3	7+4*	22	32	17	10	17	27	26	28	
Drafting and Design			6*	8								
Electrical Engineering	8 months	2	19	53	71	85	95	94	91	107	114	
Machine Shop Practice	8 months	2		12				3	3	10	5	
Mining	5 weeks	1	10	11		7	1	1	3	5	3	
Motor Mechanics	8 months	2	32+4*	44	60	82	60	71	90	106	114	
Steam Engineering	8 months	2	13+7*	21	27	38	32	35	35	24	18	
Tractor Engineering	5 months	2	25	37	57	106	89	88	125	243	352	
Tractor Engineering (Special)	5 weeks	1	59									
Telegraphy (Station Agents)	8 months	2					15	20	26	36	40	
Summer School	6 weeks			34					51	51	57	
Dressmaking and Millinery	8 months	2			21	30	35	43	41	35	38	
Farm Mechanics and Construction	5 months	1					15	25	18	28	47	
Industrial Art	8 months	2							2	13	14	
Welding	3 weeks										3	
Totals			165+24*	245	295	399	373	418	538	699	861	

* Part-day courses.

students for work as tradesmen. For instance, the mining course was designed to prepare students for certification as mine managers, pit bosses and fire bosses in accordance with the requirements of the Alberta Mines Act. The object of the commercial art course was to provide a basic all-round training necessary for advancement in the field of commercial art. Industrial dressmaking and millinery was intended to turn out capable buyers and sales people as well as skilled productive workers in the garment industry. Successful completion of the regular drafting and engineering courses enabled graduates to advance into positions of foremen and superintendents. Noting that graduates of the engineering courses did "remarkably well" in industry, Dr. Carpenter said,

It seems to me that this should continue to be our main function--to provide the future leaders of industry--not the professional men or engineers but the men who lead the workers--the men on the job who direct the gang and see that the work is well done.⁴³

Dr. Carpenter stated that the members of the Calgary College Commission had in mind that the Institute of Technology should provide instruction of Junior College grade and that it "should prove a valuable feeder to the Faculties of Engineering and Applied Science of the University."⁴⁴

⁴³ Carpenter, op. cit., page 4.

⁴⁴ Ibid., page 5.

He believed that it was both desirable and feasible that the Institute provide one or two years of university work in junior engineering courses. He felt too that such courses could conveniently be given by the teaching staff at the Institute.

In view of the development of the Institute's curriculum in later years it is of some significance to note Dr. Carpenter's suggestion that, as far as industrial training was concerned, the scope of the curriculum include (1) technical courses (2) trade courses (3) junior engineering courses. "In other words," he said, "I suggest that as in the army we train the non-coms first, the rank and file second and the officers third." ⁴⁵

Evening Courses

Evening courses were designed to assist workers in industry by supplementing their practical work with instruction in "technical and theoretical branches of their trade." ⁴⁶ The scope of the evening-course program was unlimited. A course would be organized and offered if a sufficient demand for it existed, and if it did not duplicate an evening course provided by the Calgary School Board. Not

⁴⁵ Ibid.

⁴⁶ Provincial Institute of Technology and Art, Annual Announcement, 1922-23, page 46.

all evening courses tried survived, but as unsuccessful courses were dropped from the program, new courses were added.

The evening-course program, like the day-course program, had its beginning in 1916. The growth of the evening-class curriculum and enrolment from 1920 to 1929 is traced in Table III, pages 148-149.

Instruction in an evening course was given in a two-hour period twice weekly. Lengths of courses varied from five to twenty weeks. Due to increased enrolments it became necessary in 1926 to organize two shifts of classes--from 6:00 p.m. to 8:00 p.m., and 8:00 p.m. to 10:00 p.m.

A number of evening courses were arranged through the cooperation of the four Western Provinces. Up to 1927, however, only Manitoba and Alberta carried their discussion into detailed action. In this year Manitoba organized evening-course programs in electricity, forging, and English for the non-English. Alberta's contribution to the scheme were similar programs in dressmaking, mathematics, and science. The results of the work of each of the two provinces were available to the other.⁴⁷

An interesting addition to the evening-course

⁴⁷ Alberta, Department of Education, Annual Report, op. cit., 1927, page 73.

TABLE III

ENROLMENTS IN EVENING CLASSES 1920-1929
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Course	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Armature Winding	8	22	16		14	27	17	21	19	
Battery and Ignition	37	28	22	35	44	26	24	16	36	
Car Owners	9					15		48	33	
Drafting	33	27	34	22	16	40	47	52	98	
Electrical Engineering	35	20	27	42	38	26	40	40	30	
Machine Shop Practice	21	43	41	38	39	34	49	52	46	
Motor Mechanics	25	45	36	29	33	39	89	90	119	
Shop Mathematics	9		14							
Steam Engineering	16	18	21	29		39	28	31	19	
Telegraphy	34	25	32	21	14	18	26	39	53	
Building Construction		12								
Industrial Chemistry		11	11	20						
Mathematics and Science		21								
Chartered Accountancy			15							
Dressmaking and Millinery								13	20	
Chemistry for Nurses				19						
Industrial Art						16	34	44	28	
Dyes and Cleaners						7				
Oil Chemistry						29	14	13	9	
Show Cards and Posters							31	16	20	
Welding							32	34	41	
Geology and Prospecting							15	30	21	

TABLE III (continued)

Course	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Plumbing and Heating							19	17	31	
Tractor Engineering							11		14	
Caretakers							32			
Radio							15	18	24	
Woodwork								12	28	
Credit Men's Institute								170	70	
Forging									16	
Teacher Training									29	
Ground Course in Aviation									76	
English for non-English									17	
Mathematics (Mining)									19	
Totals	227	272	269	255	198	316	523	756	916	

program in 1928 was the ground course in aviation, organized in cooperation with the Calgary Aero Club. The course was made possible by a gift of a complete Sopwith Camel airplane, a Clerget rotary aircraft engine, and a Wolsely Viper aero engine from the Royal Canadian Air Force.

The introduction of the ground course in aviation reflected the advancing age of air travel and was the seed from which grew the Institute's department of aeronautical engineering.

Correspondence Courses

In 1920 the Institute continued its Correspondence Department which, since the first opening of the Institute in 1916, provided instruction by correspondence in coal mining. These courses in mining reached students in isolated points as well as those in larger mining centers. Through the cooperation of the Institute's Extension Department and local school boards, night classes for miners were arranged in many mining centers. Prepared lessons were mailed from the Institute to the instructors of evening classes at these centers. The ten-day course in mining at the Institute was given free to any correspondence student in mining. By 1919 night schools for miners were established in Bellevue, Taber, Lethbridge, Wayne, Rosedale, Nacmine, Bankhead, Nordegg, Pocahontas, Brule and Mountain

Park. Between 1916 and 1920 four hundred fifty-three miners were enrolled in mining courses. Forty-four percent of those enrolled completed their courses successfully.⁴⁸

The courses for miners proved valuable to them and enabled many to acquire certificates required by Provincial Department of Mines for all mine officials.⁴⁹ The certificates were of three classes--first, second and third--and were required by mine managers, pit bosses and fire bosses respectively.

Steam engineering made its entry into the Institute's curriculum in 1917 as part of a day course in mechanical engineering. Monthly examinations were held at the Institute by the Steam Boilers Branch of the Provincial Department of Public Works for candidates seeking permission to take charge of boilers and steam engines. The number of certificates of various classes issued to successful candidates in the years 1918 and 1919 totalled 1855, a figure greater than the number of teachers graduated from Alberta's three Normal Schools in the same period.⁵⁰

⁴⁸ Ibid., 1919, page 105.

⁴⁹ Provincial Institute of Technology and Art, Annual Announcement, 1921, page 3.

⁵⁰ Alberta, Department of Education, Annual Report, 1920, page 129.

In 1920 a member of the Institute's staff, Mr. Robert Dingwall, A.R.T.C., was appointed to direct a program of instruction in steam engineering for the Province. In consultation with Mr. W. Hobson, Chief Inspector, Steam Boilers Branch, Mr. Dingwall prepared a syllabus for each of the three certificates issued by the Branch. Correspondence lessons were prepared on the syllabi and sent out in the same year to instructors of local night classes in Lethbridge, Redcliff, Calgary, Drumheller and Edmonton.⁵¹

Table IV shows the enrolments in mining and steam engineering during the period 1920-1929.

TABLE IV

ENROLMENTS IN CORRESPONDENCE CLASSES 1920-1929
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1920	1921	1922	1923	1924	1925	1926	1927	1928
	1921	1922	1923	1924	1925	1926	1927	1928	1929
Mining	114	162	176	100	68	24	33	78	79
Steam Engineering	106	132	216	185	170	130	179	198	149
Totals	220	294	392	285	238	154	212	276	228

Through the initiative of the Institute and the cooperation of a number of local school boards, evening classes in motor and tractor engineering were opened during the

⁵¹ Ibid., page 130.

winter of 1920-21 in seven Alberta towns. The staff of the Institute prepared charts, diagrams and suggestive courses which were mailed to instructors of these evening classes. The classes were arranged primarily for farmers as assistance leading towards more efficient operation of their farms. In spite of an auspicious beginning, this branch of the work of the Institute's correspondence department apparently did not survive, as no further reference to the work was found.

VI. ESTABLISHMENT OF THE ART DEPARTMENT

At its first opening in 1916 the Institute contained the nucleus of the art department under the direction of Mr. L.E. Pearson. Instruction in art was given in evening and Saturday morning classes until 1917 when the Institute was virtually turned over to the Military Hospitals Commission.

Following Provincial repossession of the Institute, courses in art for teachers and for prospective commercial artists were offered as early as 1921, but a sufficient demand to warrant offering a course in art did not arise until 1925 when industrial art was placed on the evening-course program in the following year.

The appointment in 1926 of Mr. Lars Haukeness, a Norwegian artist, as a half-time instructor heralded the

revival of the art department.⁵² Only two students were enrolled in the Institute's first regular two-year day class in art in the 1926-27 term. The enrolment in the following term rose to thirteen. The art department was expected to become very popular in the next few years.

The object of the course in commercial art was to provide a basic all-round training necessary for advancement in the commercial art field.⁵³ The course was to enable the student to attain efficiency in fine as well as in applied art, as it included instruction in oil and water-color painting, decorative design, and lettering.

VII. THE SUMMER SCHOOL PROGRAM

The first summer school at the Institute of Technology and Art was conducted from July 5 to August 5, 1921 for teachers of vocational subjects with and without previous professional training.⁵⁴ Instruction for the former group was of a practical and scientific character in

⁵² Provincial Institute of Technology and Art, Art Department, Prospectus, 1947-48, page 4.

⁵³ Provincial Institute of Technology and Art, Annual Announcement, 1928, page 28.

⁵⁴ Alberta, Department of Education, Annual Report, 1921, page 115.

electricity. The course, requested by teachers of manual training, was to be covered in two summers. An elementary certificate in electricity was to be issued for successful completion of the course. Instructors of the electrical course were Messrs. J.H. Ross, L.H. Bennett and R. Gendall.

Teachers without previous professional training received instruction in teaching methods in vocational subjects, principles of education, trade analysis, lesson preparation, and practice teaching.⁵⁵ This class at the Institute numbered twenty-one and was conducted by Mr. L.H. Bennett and Mr. Campbell, Director of Technical Education. Six students were enrolled in a similar class in Edmonton conducted by Mr. A.E. Torrie and Mr. Campbell who extended his services to students at both centers.

Prior to June, 1921 no certificates had been issued to teachers of special subjects in Alberta by the Department of Education. Some of these teachers were teaching manual training and household economics in the Province's elementary and secondary schools; others were teaching vocational subjects in the technical schools. In 1921, on presenting evidence of their academic, professional and vocational training, all were granted certificates as teachers of

⁵⁵ Ibid.

special subjects in accordance with the statements of qualifications submitted. Forty-four such certificates were issued by the Province in that year.⁵⁶

Certification of teachers of vocational subjects apparently led to greater interest among these teachers in raising their professional qualifications. This increased interest probably accounted in part for the establishment of summer school courses for teachers in the vocational education field.

The Institute's summer school for teachers was, however, temporarily discontinued. This was due perhaps to an insufficient continued demand by teachers for these courses, as suggested by the very small teacher enrolment in the next summer session held in 1926.

The proposed session in that year was publicized as the first summer course in practical subjects offered in Western Canada.⁵⁷ The session was instituted as an experiment to discover whether there was a "constituency interested in the expressional phase of education" as manual training and household economics had "receded to a low ebb"

⁵⁶ Ibid., page 113.

⁵⁷ Provincial Institute of Technology and Art, Annual Announcement, 1926, page 3.

in the Province's educational system.⁵⁸ Another objective of the summer course was to provide exploratory experiences in shopwork for students attending.

The courses were entirely practical for they included no formal lectures or classroom work. Students devoted their full time to shop projects.

Anyone over fifteen years of age was entitled to attend the summer school. The total fee was \$12.00 of which \$5.00 was a tool deposit. Room and board for out-of-town students was available at Mount Royal College for \$40.00 for the five-week period.

The majority of the fifty-three students enrolled in the 1926 summer session were high school students of whom more than one-half were from points outside Calgary. One quarter of the enrolment consisted of teachers. Instruction was given in woodworking, electricity, motor mechanics, machine shop practice, art, drafting, cooking and sewing.

The curriculum was extended in the 1927 summer session. To the "Find Yourself" courses given in the previous summer were added Manual Arts 1, Household Science 1, an experimental three-week course in shop and laboratory work for high-school teachers of science, and a

⁵⁸ Ibid.

course in teaching methods in commercial subjects.⁵⁹

Credit towards Normal School entrance standing was given students who successfully completed Manual Arts 1 and Household Science 1. The three-week course in shop and laboratory work was arranged for high-school teachers who, although they were not specialists in science, were compelled to teach science courses due to limitations of their staff. The teaching-methods course in commercial subjects was arranged in cooperation with the Gregg Publishing Company. Modern methods of teaching Gregg stenography, typewriting, and business English constituted the subject matter of the course.

Much the same program was planned for the 1928 summer session. A course in the pedagogy of vocational subjects was to be added for teachers of vocational subjects. The course was designed as a preliminary qualification for a permanent vocational teaching certificate.⁶⁰

The enrolment of 57 students in the 1928 summer session was only a slight increase over the 1927 figure of 51. Although another summer session for 1929 was announced, it was not held. Dr. Carpenter reported in 1928 that the

⁵⁹ Provincial Institute of Technology and Art, Annual Announcement, 1927, page 66.

⁶⁰ Ibid., 1928, page 67.

summer courses were not well attended and that it was doubtful whether they could be made successful.⁶¹ He attributed the lack of attendance to the fact that the summer courses were intended to appeal mainly to high school students, who were not eager for further confinement in a classroom following final examinations at high school. Not until 1935 was another summer session held at the Institute.

VIII. IN-SERVICE TRAINING

In order to be of the greatest possible service to industry, the staff of the Institute has consisted of specialists well equipped by training and experience.⁶² From time to time, however, members of the staff including the principal, made extended visits to industrial establishments in Canada and the United States, spent summers working in industry, and studied at universities in order to keep up-to-date with developments in industry and to improve themselves professionally.

Steps were taken at the Institute itself to correlate and strengthen instruction and to raise professional qualifications of the teaching staff. In the summer of 1924 the

⁶¹ Alberta, Department of Education, Annual Report, 1928, page 67.

⁶² Ibid., 1921, page 116.

staff began the practice of analyzing shop courses taught at the Institute.⁶³ The completed analyses were made the subject of discussion at daily meetings of the entire staff in September when amendments and suggestions regarding the analyses were accepted. Shop tests of various suggestions made were carried out during the approaching term. Though at first puzzling to many members of the staff, the "job" analyses provided instructors of correlated subjects with much valuable material for their courses. The instructors were thus enabled to relate their subject matter to shop-work more closely.⁶⁴

A special in-service teacher training course was conducted for members of the Institute staff from November 21, 1928 to March 27, 1929.⁶⁵ The course consisted of five hours of instruction distributed in two sessions weekly in the following subjects: Psychology (13 hours), Teaching Methods and Practice Teaching (33 hours), Management and Theory of Education (13 hours), Job and Occupational Analysis (20 hours). Instructors used were with one exception members of the Institute staff.

⁶³ Ibid., 1924, page 106.

⁶⁴ Ibid.

⁶⁵ Ibid., 1928, page 67.

Every student was required to write an examination on "James' Talks to Teacher" and on a book approved by the staff. Each of the twenty-eight members taking the course was required to turn in a detailed occupational analysis as a thesis, and to write examinations on the course at its conclusion.

IX. STUDENTS

Background of Students

A cross-section of students' backgrounds is provided in Table V, page 163. The information which appears in these tables is not available for the 1920-21 and the 1921-22 terms. It is known, however, that the students in the 1922-23 term were a little younger than those in the preceding term, but possessed a higher academic standing. Although the average academic standing of students in the 1926-27 term is not available, the staff was of the opinion that the student body in that year was the best the Institute had had up to that date in ability to appreciate the instruction given and in its general attitude.⁶⁶

The figures regarding academic standing and nationality hardly bear out Mr. Aberhart's contention in 1916

⁶⁶ Alberta, Department of Education, Annual Report, 1926, page 56.

that the Institute would not appeal to many except the alien born or the retarded.

TABLE V

STATISTICS ON BACKGROUND OF DAY CLASS STUDENTS 1922-1927
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

	1922 1923	1923 1924	1924 1925	1925 1926	1926 1927
Average Age (years)	20.2	19.6	20.04	21.4	
Average Academic Standing (grade)	8.8	8.61	8.8	8.8	
<u>Residence</u>					
From Calgary	41%	38%	14.3%	28.8%	34.2%
From Other Points	59%	62%	85.7%	71.2%	65.8%
<u>Nationality</u>					
Canadian	53.3%	69%	48.2%		
British	28.4%	20%	22.2%		
American	11.3%	4%	21.1%		
"Foreign"	7%	7%	8.5%		

Admission Requirements

When the Institute was reopened in 1920 under Provincial control, applications for admission were considered from anyone over the age of 15 years. Every effort was to be made to adapt instruction and work to the capacities of the students. For admission to certain courses, however, students were required to have qualifications approved by the staff. In 1922 the Institute announced that examinations in arithmetic and English would possibly be given to students whose qualifications the staff found necessary

to ascertain.⁶⁷

It was found necessary in 1923 to refuse admission to a number of students in all courses except tractor and drafting due to a lack of shop space.⁶⁸

In 1925 the Institute announced its right to admit first those students considered to have the essential qualifications to ensure success in a course applied for, if applications for that course exceeded accommodation in it.

Overcrowding remained a problem, however, especially in the motor mechanics, welding, and electrical departments, and in courses pertaining to the building construction trades.⁶⁹ In 1928 the minimum age for admission was raised to sixteen years.

Fees

In 1920 the fees charged were \$5.00 per term for short courses and \$10.00 per term for "regular" courses. Fees for special courses were determined by separate arrangement. In the following year the fee for courses of

⁶⁷ Provincial Institute of Technology and Art, Annual Announcement, 1921, page 8.

⁶⁸ Alberta, Department of Education, Annual Report, 1923, page 93.

⁶⁹ Ibid., 1928, page 65.

less than three months' duration--short and special courses--was \$5.00, as it was also for an evening class. The fee for a correspondence course leading to a first-class certificate was \$25.00; to a second-class certificate, \$15.00; and to a third-class certificate, \$10.00. The fee for the three-week welding course begun in 1926 was \$20.00.

Additional expenses for a student enrolled at the Institute were as follows: books, about \$5.00; tool deposit, \$5.00 (recoverable), Students' Association fee, \$1.00 for students enrolled in short courses; \$2.00 for students enrolled in regular courses. Residential accommodation was not available at the Institute. Board and room off the campus cost the student an additional \$7.50 to \$8.50 per week.⁷⁰ Thus the minimum cost to an out-of-town student for attendance in an eight-month day course at the Institute in the 1920-29 term was approximately \$300.00.

Certificates and Diplomas

From the time of the Institute's reopening, certificates were issued to all students on satisfactory completion of any unit or short course. Diplomas were issued on completion of a regular Institute course. The passing mark

⁷⁰ Provincial Institute of Technology and Art, Annual Announcement, 1922, page 7.

for a certificate course was 65 percent. A subject passing mark of 60 percent and an overall average mark of 70 percent were required for the awarding of a diploma.⁷¹ Table VI, page 167 records the number of diplomas issued by the Institute in the period 1920-1929.⁷²

Day-class certificates issued in the same period were as follows: Special Tractor 167, Battery and Ignition 6, Welding 4, and Farm Construction 5.

The number of certificates and diplomas issued between 1920 and 1929 is small in comparison with enrolment figures. One reason given for this was that many students started courses late and left early.⁷³ Also, the failure and drop-out rates were high. In a 1923 sampling of Electrical students, 20.5 percent of the students enrolled failed and 12.25 percent dropped out.⁷⁴

Notwithstanding the small number of diplomas issued in the period 1920-29, a marked increase in the number of diplomas issued, in proportion to enrolment, occurred in

⁷¹ Provincial Institute of Technology and Art, Annual Announcement, 1922, page 11.

⁷² Compiled from files of the Provincial Institute of Technology and Art.

⁷³ Alberta, Department of Education, Annual Report, op. cit., 1925, page 100.

⁷⁴ Carpenter, op. cit., page 3.

1925. An outstanding characteristic of the enrolment in the 1924-25 term was the unprecedentedly large number of students who returned for the second year of their courses.⁷⁵ Whereas the ratio of diplomas issued to student enrolment prior to 1925 was approximately 1:28 respectively; it was 1:18 in the period 1925-29.

TABLE VI

DIPLOMAS ISSUED IN THE PERIOD 1921-1929
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1921	1922	1923	1924	1925	1926	1927	1928
	1922	1923	1924	1925	1926	1927	1928	1929
Electrical Engineering	8	5	11	11	19	11	17	26
Motor Mechanics	3	1	2	3	4	2	2	2
Steam Engineering	2	1			4	6	5	3
Tractor Engineering			2			1		6
Architectural Drafting					1			
Survey Drafting					1		2	1
Mechanical Drafting							2	
Battery and Ignition		1				2		
Dressmaking and								
Millinery			1		4	7	4	3
Dr. sic (3rd)				2				
Totals	13	8	16	16	33	29	32	41

⁷⁵ Alberta, Department of Education, Annual Report, op. cit., 1925, page 98.

Placement

Evidently little had been done by the Institute before 1927 to assist students in their search for employment following the termination of their courses.⁷⁶ A placement committee was organized in 1927 with Mr. Andrew Baxter, a member of the Institute staff, to act as secretary. Mr. Baxter was charged with the responsibility of collecting and organizing data on possible openings for trained young men and with assisting in the placing of qualified students in such openings as they occurred. In his "slack season" visits to many points in the Province, Mr. Baxter was to act, also, as publicity agent of the Institute to acquaint more people with its educational services.⁷⁷

It would seem that the committee was inactive until 1929 when it was reported that many young men had been placed in that year into positions which they otherwise might have had difficulty knowing about or acquiring.⁷⁸ Some complimentary remarks were received from employers regarding the work of several of the students placed.

⁷⁶ Ibid., 1927, page 71.

⁷⁷ Ibid.

⁷⁸ Ibid., 1929, page 74.

Extracurricular Activities

The Students' Association was formed in January, 1921 for the purpose of promoting intellectual and physical improvement and a better social intercourse among the student body.

Following are extracts from the Constitution of the Students' Association:⁷⁹

The aims and objects of the Association shall be:
The fostering and encouragement of cooperative effort to the end that the welfare of its members may be promoted along the following line:

- (1) Literary
- (2) Athletic
- (3) Social

All students of this Institution fully enrolled in any regular course for the current year shall be members of this Association, provided that students enrolled in evening courses may become associate members upon payment of fee as hereinafter provided.

The membership fee shall be \$2.00 for all students enrolled in regular courses and \$1.00 for part-time students or students enrolled in special courses.

A literary society and an athletic association were organized in the same year. Activities organized during the year by these groups included debates on alternate Friday afternoons, visits to industrial establishments, and various sports. Basketball was, however, the only sports activity in which games were played against teams outside the

⁷⁹ Provincial Institute of Technology and Art, Annual Announcement, 1922, page 53.

Institute.

The progenitor of the annual banquet was organized in 1922 in the form of a smoker, as the student population was entirely male. The annual banquet became the outstanding social event of each year. Held until 1928 in the Hudson's Bay Elizabethan Room, it was moved in that year to more commodious quarters in the Al Azhar Temple.

Successful also were the weekly "Lits" on Wednesday afternoons following meetings of the Students' Council. "Lit" programs were amateur theatricals performed by students and staff members alike. For the most part these concerts consisted of a wide variety of individual performances, although short plays were sometimes presented. Though predominantly musical, individual presentations included rope spinning and ventriloquism. The "Lits" soon became an established part of the students' extracurricular life as they afforded a "glorious opportunity for classes and individuals to 'let off steam' and air their troubles before the whole school." ⁸⁰

Emery Weal, the official organ of the Students' Association was first published in 1925. Published only twice annually in its early existence, by 1929 the newspaper

⁸⁰ Provincial Institute of Technology and Art, Tech-Art Record, 1927-28, page 20.

appeared monthly during the regular school term.

One of the purposes of the Emery Weal was to polish the personality of students for the "good of all:"⁸¹

Students who give themselves undue prominence or undesirable publicity in corridors or classrooms are certain to find themselves given still further publicity in the "Short Circuits," "Sporting Tit-Bits," or "Tabloid News" of the next issue of the Emery Weal. This type of discipline or censure, coming as it does from the students themselves and done in a way that is above reproach, is beneficial to a high degree.

The Emery Weal featured "every phase" of student activity--athletic, literary, musical, social, and military. Also featured in each issue was an article on a recent engineering or scientific advancement which had not yet found its way into text books used at the Institute.

The paper was entirely self-supporting. Advertisements were invited only from firms which the students patronized.

The first year book, Tech-Art Record, was published in 1928. The appearance of the Students' Association's first annual publication was considered a direct outgrowth of the success and popularity of the Emery Weal.⁸²

Assisting in the maintenance of student discipline was a joint council composed of representatives from the

⁸¹ Ibid., page 77.

⁸² Ibid., page 7.

students' councils of the Normal School and the Technical Institute. Established shortly after the Institute moved to its new home on North Hill, the joint council strived also to foster good relations between the two student bodies.⁸³

X. BUILDINGS AND EQUIPMENT

The new home of the Institute consisted of three buildings--the main building, which also housed the Normal School, the workshop building, and the power plant.

The three-story main building was 340 feet long by 90 feet wide. Located on the main floor were the administrative offices and the assembly hall. On the second floor were the staff common-room, separate staff rooms, and the gallery of the assembly hall. On the third floor were the shower baths, the gymnasium, and locker rooms and the library. In the basement was a dining room and a service kitchen.

The west wing of the main building became the new home of the Normal School, housing its classrooms and practice school.

The east wing was put into use by the Technical

⁸³ Alberta, Department of Education, Annual Report, 1924, page 105.

Institute. On the main floor were the laboratories and lecture rooms, on the second floor the household economics department, and on the third floor the art and drafting rooms.

Approximately 125 feet to the rear of the main building was the single-storey workshop building the dimensions of which were 317 feet by 100 feet. The building was divided into sections or shops for steam engineering, electrical engineering, tractor engineering, gas engine work, machine shop practice, auto mechanics, forging, and woodworking. Located in the shop building as well were two lecture rooms, a staff room, a tool and supply room, and a manual training room for students of the Normal School.

Situated immediately behind the workshop building was the power house, 100 feet by 50 feet. The power house consisted of a boiler room with provision for three 225 horsepower high pressure water-tube boilers equipped with mechanical stokers. Also installed in the boiler room were overhead coal bunkers with the latest type of coal and ash-conveying machinery.

Adjoining the boiler room on the same floor was the engine room, equipped with various types of electrical-generating machinery to provide the Institute with its lighting and power needs. The pumping machinery for the

water supply and heating system was installed in the basement of the power house in 1923. In the following year an underground tunnel was dug between the power house and the main building.

The power plant was designed to accommodate experimental work including research in fuels, and instruction in power plant engineering.⁸⁴

By 1926 every department except that of steam engineering was using its allotted space to capacity.⁸⁵ Due to growing demands for more shop accommodation, a wing 159 feet by 70 feet was added to the shop building in 1926 at a cost of \$40,000.00. The additional space was utilized by the greatly overcrowded motor mechanics department.

Again in 1928 a second wing 154 feet by 40 feet was added to the shop building to provide additional space for the tractor engineering department. Farm machinery firms "filled" the shop with late-model gasoline powered machines valued at approximately \$75,000.00. The new wing contained also a 250 seat amphitheatre for demonstration purposes.

The provision of additional space was not, however,

⁸⁴ Provincial Institute of Technology and Art, Annual Announcement, 1923, page 8.

⁸⁵ Alberta, Department of Education, Annual Report, 1926, page 56.

keeping up with the demand.⁸⁶ The need for additional space for the motor mechanics department grew, consistent with the increasing demand for instruction in automotive mechanics. Additional space was urgently required by the building trades department. Accommodation was needed by the fledgling aeronautical department. The lunch room for students was overcrowded, and a strong recommendation was made by Dr. Carpenter to the Department of Education that additional space for the lunch room be provided as soon as possible.

⁸⁶ Ibid., 1929, page 75.

CHAPTER VII

THE INSTITUTE AND THE ECONOMIC DEPRESSION

I. THE EFFECT OF THE DEPRESSION ON THE CURRICULUM AND ENROLMENT

The remarkable growth of enrolment at the Institute in its first decade of operation under Provincial control ended suddenly in 1929. As seen in Table VII, pp. 177-178, the total enrolment declined steadily from 2023 in 1929 to 690 in 1935. The seriousness of the retardation initiated by the Economic Depression is suggested by the fact that not until 1950 did the total enrolment again reach the 1929 figure.

The prosperity and optimism of 1929 was swept away, following the autumn slump in that year, by falling markets, deflation and pessimism.¹ By the end of the year there was much unemployment. Prices of farm products dropped to unprecedented lows and declining business activity caused much concern. Only a few Alberta centers remained financially able to continue operating technical and prevocational schools.

¹ Alberta, Department of Education, Annual Report, op. cit., 1930, page 86.

TABLE VII
ENROLMENTS IN DAY CLASSES 1929 - 1939
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Course	Length of Course		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Aeronautics	2 years			8	26	44	31	41	45	54	62	73	
Art	1-4 years		20	40	44	44	47	62	57	43	50	44	
Auto Electricity	5 months		30	17	10	16	8	12	20	13	7	16	
Drafting			24										
Dressmaking and Millinery	2 years		23	31	29	43	63	57	53	61	52	56	
Electricity	2 years		124	145	144	145	115	102	89	101	84	72	
Farm Mechanics	5 months		26	14	12					35	55	44	
Geology and Prospecting	2 years				8	9	12	28	29				
Machine Shop	2 years		7	10	14	21	22	7	17	15	19	16	
Mining	2½ weeks		6	4	124	9	3	5	7	6	6	6	
Auto Mechanics	2 years		133	107	92	90	98	93	112	89	90	105	
Steam Engineering	2 years		15	11	9	6							
Telegraphy	2 years		36	27	12								
Tractors	10 months		217	91	28							56	
Acetylene Welding	3 weeks		18	91	51	2	111	111	103	98	133	203	
Electric Welding	3 weeks				4	2	6	3	13	4	7	2	
Architectural Drafting	3 years			9	12	19	9	6	1				
Mechanical Drafting	3 years			6	10	12	8	5	1	1	3	3	
Survey Drafting	3 years			14	7	13	12			6		6	
Chemistry (Special)	14 months				2		1	3	1				
Automobile Servicing	1 year					17	1						
Placer Mining	3 weeks					111							
Building Construction	2 years							7	8	7	18	12	
Diesel Engines	5 weeks								122	29	23	34	
General Shop	8 months								3	7	14	6	
Summer School (Calgary)	5 weeks								37	80	108	137	

TABLE VII (continued)

Course	Length of Course															
Summer School (Banff) Radio Specials	3 weeks															
	8 months															
Totals	679	625	638	603	547	542	748	699	793	940						

Contributing directly to the decline in enrolment at the Institute in 1929 was the termination of the 1919 Federal Education Act and the cessation of financial aid from the Federal Government,² even though the Province had not yet entirely used up the \$678,524.40 granted her by the Act.

A new Federal Vocational Education Act was assented to on August 3, 1931 to provide the provinces with \$750,000 per annum for fifteen years. The grants were to be conditional on Dominion - Provincial agreements governing the purposes for which the funds were to be spent.³ The annual grants were to be divided among the provinces according to their population at the time of the last decennial census. The Act did not define vocational education, however, and did not require the provinces to match Dominion expenditures. The Act never became operative and no funds were spent under it.

Due to falling revenue for regular day and evening courses the tuition fees were doubled.⁴ Fees for correspondence courses were substantially raised. The increased fees were considered to have adversely affected the enrolment,

² Ibid., page 89.

³ Vocational Education in Canada., op. cit., page 25.

⁴ Alberta Department of Education, Annual Report, op. cit., 1929, page 75.

particularly in the 1930-31 term.⁵ The effect was particularly noticeable in evening class enrolments and in the reduced number of rural students in day classes.

Also accounting for the decreased enrolment in the 1929-30 term was the opening in 1929 of the new Calgary Technical High School and the consequent loss to it of a small number of students who otherwise would have enrolled at the Institute of Technology and Art.⁶

Day Courses

Tractor engineering and farm mechanics were the courses hardest hit by the Depression. The combined enrolment of 399 in these courses in 1929 fell to 243 in 1930, to 105 in 1931, and to 40 in 1932. In the next year the farm courses were removed from the curriculum, as seen in Table VII.

Due to the serious decline in railway transportation, enrolments in telegraphy known also as the station agents' course, declined seriously, and in 1933 it too was dropped from the Institute's curriculum.

Coupled with the general slump in industry, the subsidence in the search for oil released a large number of qualified steam engineers.⁷ The demand for the steam engineering course

⁵ Ibid., 1930, page 89.

⁶ Ibid., page 74.

⁷ Ibid., 1931, page 96.

was so reduced that in 1932 one of the two instructors of the course was dismissed and, in the following year, the day course in steam was discontinued.

Owing to a curtailed budget it was found necessary in 1936 to drop geology and prospecting from the curriculum.⁸

The course was rated a valuable one as many graduates had secured good positions and three graduates had won scholarships leading to mining engineering. The course was the newest one, however, and had the smallest enrolment.

Appearing as a modest substitute was the provision of a three-week course in placer prospecting and mining in 1932. The reason for the launching of the course was as follows:

During periods of depression, unemployment and high purchasing value of gold, small scale placer mining is a means by which many a man can earn at least the bare necessities of life.⁹

The course, with an enrolment of 111 students, was offered only once. It can well remain a symbol of the Institute's desperate efforts to continue its services within a foundering economy.

Although seriously hindered by the economic stagnation of the 1930's, the Institute maintained an attentive watch on

⁸

Ibid., 1936, page 74.

⁹

Provincial Institute of Technology and Arts, Annual Announcement, op. cit., 1934-35, page 19.

technological progress, as evidenced by the offering in 1930 of a two-year day course in aeronautics.

Noting the advent of commercial air transportation, the Institute saw in the budding industry an opportunity for a varied field of employment for young men with the required training.¹⁰

The day course in aeronautics was not designed to train pilots, but rather, engineers whose responsibility it would be to repair and maintain aircraft engines. A three-month course was also offered to provide ground instruction in aeronautics necessary for those who desired to obtain a commercial flying license. No enrolment figures for this course were found, however.

In 1932, following an investigation of the aeronautical instruction provided by the Institute, the Dominion Director of Civil Aviation authorized the crediting of the whole time spent by a student in the aeronautics course towards the term of practical experience that Dominion Air Regulations required for air engineers.¹¹ The theoretical portion of the Institute's course was designed to prepare

¹⁰ *Ibid.*, 1931-32, page 37.

¹¹ *Ibid.*, 1932-33, page 28.

students to pass examinations leading to certification as air engineers.¹²

Evening Classes

The fate of the evening -course program was even more regrettable. The peak enrolment of 916 in evening courses in 1929 fell to 505 in 1930, to 435 in 1931 and further to 208 in 1932 Table VIII, pp. 184-185.

A curtailment in Provincial financial support of the Institute in 1932 made it necessary to eliminate the evening class program almost entirely.¹³ As the students were largely local, the responsibility of continuing the courses was handed over to the City of Calgary.¹⁴ The reason for the cancellation of almost all evening courses was due entirely, however to the lack of money.¹⁵

The continued demand for evening classes was evidenced by the response of the unemployed to free evening classes offered in the fall of 1933. The program was drafted by representatives of the Calgary Public School Board, the Calgary Separate School Board, the Public Library, the Ministerial Association, the Y.M.C.A., the Y.W.C.A., Mount

¹² Ibid.

¹³ Alberta Department of Education, Annual Report, op. cit., 1932, page 69.

¹⁴ Ibid., page 70.

¹⁵ Ibid., 1933, page 70.

TABLE VIII (continued)

Course	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Electrical Shopwork		22									
Mathematics for Engineers		11									
Mathematics for Plumbers and Steamfitters		15									
Plumbing Theory (3rd year)			12								
Plumbing Shopwork		13									
Dressmaking and Millinery		11									
Modern Merchandising											13
Arts and Crafts									24		
Oil Chemistry											14
Photography											20
Weaving											32
											5
Totals	505	435	208	56	29	28	38	36	203	246	

Royal College, and the Provincial Institute of Technology and Art.

The courses selected for the program were to run from about the first of November to the end of March. The subjects were divided into groups such as elementary school subjects including English for the non-English, commercial and other vocational subjects, and physical training. Discussion groups were to be organized in psychology, philosophy, and literature.

No tuition was to be charged. Instruction was to be voluntary on the part of the teachers, and classroom accommodation was to be provided free of charge.

Although 718 persons enrolled in the evening class program, only 534 received instruction. Accounting for this was the inability to organize classes in all sixty subjects requested, and the removal of a number of the enrolled men to rural relief centers.¹⁶

The subjects offered were electricity (elementary and advanced), woodwork, farm mechanics, steam engineering, aeronautics, motor mechanics, geology and prospecting, chemistry, radio, drafting (elementary and advanced), mathematics (elementary and advanced), gas engine ignition,

¹⁶ Ibid., page 73.

homesteading and farming, poultry raising, gardening, and show card writing.

The attendance throughout the term was very good, some men attending as many as five nights each week.¹⁷ Instruction was given by a staff of thirty-six volunteer instructors.

Though the program was considered a success, it was not continued in the fall of 1934 for the reason that increasing numbers of men were being absorbed by relief camps.

As an experiment, however, a new educational program was set up in the same year in the nine camps located on the Banff Trail, west of Calgary.¹⁸ The Institute organized the program of courses which included instruction in English and elementary school subjects.

Working full time in the camps, an educational supervisor sought to discover educational needs of the men, to interest them in some educational program, and to arrange for the provision of necessary facilities. In each camp, containing about 125 men, the supervisor selected an instructor whom he assisted in setting up classes and

17

Ibid.

18

Ibid., 1934, page 77.

conducting the instructional program.

Through the cooperation of the British Columbia and Alberta departments of education, correspondence courses -- five from British Columbia and five from Alberta -- were made available in steam engineering, coal mining, mathematics, drafting, building construction, geology and prospecting, electricity, and motor mechanics.

The educational supervisor interviewed each applicant for a correspondence course and advised him of his prospects of success in it.¹⁹

The program was continued in the winter of 1935. One hundred and fourteen men were enrolled in English for the non-English, 176 in elementary school subjects, and 80 in ten correspondence courses.

Plans were made to continue the educational work in the following winter with the addition of high school subjects to the program of courses. Relief camp authorities had agreed to erect huts to serve as school headquarters.²⁰ No further reports regarding continuation of this educational service were found, however.

The evening-class program at the Institute was

19

Ibid.

20

Ibid., 1935, page 85.

re-established in the fall of 1937 when the Institute received²¹ a Provincial grant for capital expenditures. The 1937-38 enrolment of 203 students rose to 246 in the succeeding term. Added to the evening-class program in 1938 was a number of new courses, including photography, merchandising, and oil chemistry.

Correspondence Courses

The Correspondence Department was hard hit by the effects of the Depression. By 1932 the enrolment fell to less than one-half of the 1928-29 figure. Only two instructors were retained in the home study department, one to take charge of instruction in mining, the other in steam. In the following year the two courses were combined in one department under the direction of Mr. Alex Higgins.

Although attendance in day classes rose sharply in 1935, because of improved local crop conditions,²² enrolments in the Correspondence Department did not increase substantially until the following year (Table IX, page 190).

Possibly as an economy measure, a change was made in 1929 in the policy of issuing lessons to correspondence students. Prior to this time lessons were mailed to students every two weeks whether a completed lesson was returned in the

21

Ibid., 1937, page 78.

22

Tech-Art Record, op. cit., 1935-36, page 8.

TABLE IX

ENROLMENTS IN CORRESPONDENCE COURSES 1929 - 1939
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1929 1930	1930 1931	1931 1932	1932 1933	1933 1934	1934 1935	1935 1936	1936 1937	1937 1938	1938 1939
Mining Engi- neering	61	40	55	74	64	36	54	70	54	61
Steam Engi- neering	174	145	123	40	89	84	91	102	109	126
Electricity			2	4	2					
Art							1	4		
Mechanical Drawing								4		
Totals	235	185	180	118	155	120	146	180	163	187

interim by the student or not. The revised policy required that a student return a completed lesson before another lecture was sent him. The change was expected to stimulate students to greater effort and to prevent them from being discouraged by accumulated assignments. The effect of the changed policy is illustrated by the fact that 83 percent of lessons in mining were returned in the 1929-30 term as compared to 36 percent in 1928-29. The figures regarding lessons in steam engineering were 75 percent and 32 percent respectively.

Efforts between 1931 and 1936 to include electrical, art, and drafting instruction into the correspondence program proved fruitless and were abandoned.

The Art Department

The death of Mr. Lars Haukeness in the summer of 1929 brought work in the art department to a temporary standstill.²⁴ In November, several months later, the Institute obtained the services of Mr. A.C. Leighton, a member of the Royal Society of British Artists whose work was internationally recognized. As head of the Institute's Art Department, Mr. Leighton actively promoted the services of the Department to the people of Calgary and of Alberta.²⁵

In spite of the general downward trend in enrolments for several years after 1929, day-class enrolments in the art department during the same period increased progressively. Enrolments in the evening art class, however, the only evening class retained at the Institute throughout the Depression years, declined steadily between the years 1930 and 1935.

Admission to the art department was extended to anyone aged sixteen years or over. Students considered to lack sufficient educational standing were subject to take English T-10,

²⁴ The Calgary Daily Herald, March 8, 1930.

²⁵ Provincial Institute of Technology and Art, Art Department Prospectus, 1947-48, page 4.

the first of two courses in English at the Institute.²⁶ A full high school education was desired by the Institute as prerequisite for admission to the art department.

As the instruction in art was largely individual, special programmes were arranged to meet a student's particular requirements. Courses of instruction were arranged to prepare students as art teachers (elementary and advanced), specialists in design, specialists in painting, show card and poster designers, magazine illustrators, costume and fashion designers, interior decorators, craft workers (in metal, leather, stencil, batik, wood carving, china painting, and pottery).

Units of instruction were combined to form "certificate subjects". A diploma was issued on the successful completion of a required number of these subjects, available in day or evening classes. The length of time required to qualify for a diploma, other than the Elementary, was approximately four years. At least two years' resident work was required of any student seeking a diploma.²⁷ Credit was allowed for equivalent work previously done by students at other institutions.

²⁶ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1930-31, page 30.

²⁷ Ibid., page 32.

The four courses offered were elementary, required for all other art courses; fine arts (drawing and painting), commercial art, and applied arts and crafts. The certificates required for a diploma in each of these courses were as listed in Table X, pp. 194-195.

Students in the art department were prepared for the Royal Drawing Society examinations. Advanced students were encouraged to enter the Royal Society of Arts' annual competition in industrial design.

In 1934 the art department won some distinction in a china-decorating contest conducted by the Paragon China Company of Staffordshire, England, in cooperation with the Hudson's Bay Company in Calgary. Rather than rewarding only the student with the winning design, the Paragon China Company awarded every one of the forty-two contestants with a cup and saucer each decorated with one of the designs submitted. Each cup and saucer set was produced by the Company at a cost of five pounds sterling.²⁸

In the same year the Institute, in cooperation with the Extension Department of the University of Alberta and the Alberta Handicrafts Guild, exhibited a collection of handcraft work done in Alberta in twenty-seven towns in

²⁸ Department of Education, Annual Report, op. cit., 1934, page 79.

TABLE X
DIPLOMA REQUIREMENTS IN ART COURSES 1930
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Certificate Subject	Unit	Courses	Elementary	Fine Arts	Commercial Art	Applied Art
General Design	R-15	Lettering				
	R-18	Plant Form	1	1	1	1
	R-17	Elementary Design				
General Drawing	R-11	Freeland Perspective				
	R-12	Cast Drawing				
	R-13	Landscape Sketching				
	R-19	Modelling	1	1	1	1
	R-14 LR-10	Home Composition Geometric Drawing and Mechanical Perspective				
Theory	R-10	Art Appreciation				
	R-20	History of Art				
	M-17	Science	1	1	1	1
	T-13	Assigned Reading				
Still Life	R-21	Still Life Drawing and Painting		1	1	
Life	R-22 R-32 R-29	Antique and Anatomy Life Drawing and Painting Modelling		1	1	
Landscape	R-23	Landscape Drawing and Painting		1	1	

TABLE X (continued)

Certificate Subject	Unit	Courses	Elementary	Fine Arts	Commercial Art	Applied Art
Composition and Illustration	R-24	Composition and Illustration Home Composition		1	1	
Commercial Design	R-25	Poster and Show Card				
	R-35	Drawing for Reproduction			1	1
Industrial Design	R-27	Craft Design and Application				
	R-28	Industrial Design				1
Craft Work	R-37	Craft Work (Special)				1
Total Certificates			3	7	3	6

Southern Alberta.

The collection, to which technical schools in Calgary and Edmonton contributed generously, was intended to stimulate interest in such work by showing the public what it is possible to achieve in these schools.²⁹

Noting an increasing interest in handcrafts, Dr. Carpenter recommended that the work of the art department be directed along the lines of applied art.³⁰ The provision for increased facilities and instruction in this branch of the department was planned for 1936.

Mr. Leighton did not confine his efforts to develop the art department only to the premises of the Institute. Out of his private "summer school" which he established at Kananaskis in 1933 grew the painting section of the Banff School of Fine Arts.³¹ In 1935, a "conspicuously" good year for the art department, a summer school in sketching and painting was organized by the Institute in cooperation with the Extension Department of the University of Alberta for a three-week period at Banff. Under the direction of Mr. Leighton, the course was attended by twenty-nine students.

²⁹ Ibid., page 77.

³⁰ Ibid., page 79.

³¹ Provincial Institute of Technology and Art, Art Department Prospectus, 1947-48, page 4.

The summer school was resumed in 1936 under the direction of Mr. H.G. Clyde, A.R.C.A., successor to Mr. Leighton, whom ill health had forced into partial retirement in the previous year. The art summer school remained, however, under the general direction of Mr. Leighton. With an enrolment of fifty students, the session was conducted between August 3 and August 21 by Messers Glyde, Leighton and Pearson.

The school for sketching and painting was thus affiliated with the University's schools for drama and music. Collectively, these schools comprised in Banff the School of Fine Arts, under the auspices of the Extension Department of the University of Alberta. Contact with the Institute of Technology remained on a cooperative basis.

The art summer school, advertised broadly through the literature of the Canadian Pacific Railway, attracted students from widely separated points on the North American continent.

Teacher Training at the Institute

In 1935 the Institute re-established its summer school for the first time since 1928, when lack of attendance had forced its discontinuation. The falling off of teacher enrolments in the summer sessions prior to 1928 and the discontinuance of the sessions in that year were probably due to the slow development of the industrial arts program

in Alberta schools.³²

The Depression emphasized the needs for vocational education. Ironically, increased awareness of this need occurred at a time when, due to high costs, any expansion in this field of education could hardly have been expected.

By 1931 mounting public interest in vocational education had become evident.³³ In the same year in a report to the Department of Education, Dr. Carpenter, Provincial Director of Technical Education and Principal of the Institute of Technology and Art wrote,

More young people have been desirous of entering school to employ their time in the absence of other employment. The nature of the times has caused youth to place a higher value on technical skill and knowledge that they may be more successful competitors in securing jobs.³⁴

Dr. McNally, Deputy Minister of Education, corroborated Dr. Carpenter's claim:

During the depression years the number of pupils seeking instruction on the high school level more than doubled. A large percentage of these had neither the interest in nor the capacity for advanced study in the subjects of an academic program. Had there been opportunity for employment many of them would never have entered the high schools at all.³⁵

³² Alberta, Department of Education, Annual Report, op. cit., 1925, page 103; 1927, page 72.

³³ Alberta, Department of Education, Annual Report, op. cit., 1931, page 93.

³⁴ Ibid.

³⁵ Ibid., 1939, page 7.

In 1931 the secondary-school population was 14.38 percent of the total school population, compared to 6.04 percent in 1921.³⁶ In 1932 the combined increase in enrolments at the technical high schools in Calgary and Edmonton totaled 491 students.

In the rural districts, too, the desire to incorporate manual subjects into the regular program of studies increased. Dr. Carpenter forecast that it would be necessary in the very near future to "draft a definite outline of studies differing from that in the urban centers and more adaptable to rural conditions."³⁷ However, limited Provincial grants for manual training and household economics, and the special qualifications demanded of teachers of these subjects combined to preclude early expansion of offerings in these subjects.³⁸

The changing situation in Alberta public schools bore serious implications for the curriculum. Said Dr. McNally,

It soon became evident that a more flexible

³⁶ Ibid., 1932, page 10.

³⁷ Ibid., page 67.

³⁸ Ibid., 1934, page 73.

curriculum, with a frank recognition of the educational value of the so-called "practical" subjects and some attempt to study the aptitudes of the pupils, was the next step in program building.³⁹

Prior to 1931 revisions in the curricula of Alberta schools had already been completed. In 1930 the course of studies for grades VII and VIII were revised to permit a liberal inclusion of shop options for credit. The Calgary Prevocational School was moved from its association with Victoria Public School and combined with the newly-opened technical high school. The curriculum of the technical high schools was likewise revised, one result being the addition of third-year units. Precautions taken in checking standards of attainment in shop subjects included inspections and examinations, both written and practical.

In view of accelerated expansion of vocational education in the public schools, Dr. Carpenter recommended in 1934 that the time had come to reopen summer classes at the Institute for teachers and other interested persons. He advised also that thought be given to the provision for courses at the Institute for those desiring to qualify in the winter months as instructors in shop subjects.

The year 1935 was a turning point in education in

³⁹ Ibid.

Alberta. The outstanding interest of the year in the Department of Education was the study given to the reorganization of the program of studies for secondary schools.⁴⁰ Proposed changes in the curriculum included the instituting of a general course which would relate academic, commercial and technical courses more closely. Liberal provision was to be made for the inclusion of practical shop subjects in all programs.

In the same year Dr. Carpenter reported a "remarkable change" in the attitude of the general public towards education through activity, a change which raised the prestige and respect of the "practical" subjects.⁴¹ He noted, as well, evidence of increasing interest and activity in vocational education throughout the Province.

Evidently a result of the growing interest in the "practical" or "industrial" arts, a special summer shop-course program was offered at the Institute in the summer of 1935, with twenty-nine teachers in attendance.

In the following summer the enrolment rose to eighty-two students, of whom eighty were certified teachers. Thirty-seven members of the student body were

⁴⁰ Ibid., 1935, page 83.

⁴¹ Ibid.

female. A total of eight courses were offered: woodwork, metalwork, electricity, motor mechanics, sewing, foods and nutrition, drafting and art metal. Each course consisted of three hours of instruction and supervised activity each day for twenty-five days.

For the reasons that the plant of the Institute was largely idle during the summer months, and that there was a demand for decentralization of summer school services, Dr. Carpenter recommended that the Department of Education expand its summer program. Music, art, dramatics and commercial courses were among courses he suggested for the Institute's summer session in 1937. Again, he advised the Department to initiate at the Institute full-term training courses for teachers of practical subjects, in cooperation with the Normal School.

Already, during the 1935 and 1936 winter sessions, teachers with professional training were enrolled at the Institute for practical experience in tool-using. Six of these teachers were enrolled in 1936, and their prospects for employment as teachers of shop subjects were excellent.⁴²

⁴² Ibid., 1936, page 74.

The year 1937 was one of continued expansion in the industrial arts and household economics fields throughout Alberta. Thirty new centers began to provide instruction in general shop subjects, and about sixty centers offered home economics services to their students for the first time.

Coincident with the nation's gradual recovery from the Depression was the emergence in Canada of the composite high school. In Alberta, schools of this type were now established in Calgary, Medicine Hat and Lethbridge. In Edmonton, support for the composite high school idea was gaining favor.

The enrolment of teachers in shop courses at the Institute's summer session in the same year likewise increased. One hundred and twenty-five students were enrolled in a broadened program which, in its arts and crafts section, included weaving, carving, batik, papier mache, and clay work.

Successful completion of shop courses at one of the Institute's summer sessions of five weeks permitted a teacher to begin teaching practical subjects in Alberta schools. Completion of a second summer program gave him permanent authority to continue teaching these subjects.

A teacher seeking to teach general shop exclusively

was required to complete a full-term program of shop subjects at the Institute. The prerequisite for admission to this course was completion of Normal School training.

Fourteen teachers were enrolled in the one-year program at the Institute in the 1937-38 term. These teachers received training in woodwork, metal work, electricity, art and design, and drafting; and participated in class discussions which dealt with methodology and the "underlying philosophy of the subjects."⁴³

It was not considered necessary to arrange similar courses for teachers of household economics for the reason that the demand for these teachers was being met by "institutions offering Home Economics courses."⁴⁴

In spite of growing enrolments, teachers' classes in shop subjects were suddenly discontinued in 1939 "because of the stress and demands upon the accommodation of the institute of Technology and Art, and because of there being an adequate supply of teachers with primary qualifications available to meet current demands."⁴⁵

Having declared war on the Axis Powers on

⁴³ Ibid., 1937, page 76.

⁴⁴ Ibid.

⁴⁵ Ibid., 1939, page 80.

September 3, Canada was now making preparations for her participation in it. The "stress and demands" were attributable in some measure to the Institute's participation in the Dominion-Provincial Youth Training Program and to the Soldier Training Program, which together swelled the 1939-40 day enrolment at the Institute by 577 students.

II. THE DOMINION-PROVINCIAL YOUTH TRAINING PROGRAM

Further efforts by the federal and provincial governments to provide vocational education for the unemployed resulted, in 1937, in an agreement between the two levels of government to launch a program for the rehabilitation of unemployed youth.

The costs of operating the program were shared equally by the federal and provincial governments. The former's annual appropriation of \$1,000,000 for the program was made under the authority of the Agricultural and Unemployment Relief Act.⁴⁶

Initially, five projects were organized for (1) the restoration of morale, provision of social contacts, physical reconditioning, and training in various phases of farm life and home-craft for rural youth (2) the

training of sixty young men in elementary work in forestry (3) the training of housemaids in Edmonton and Calgary (4) the training at the Provincial Schools of Agriculture of a number of rural youth from the drought area and (5) the training of seventy-four boys in creameries and on fur, poultry, and non-specialized farms.⁴⁷

The Dominion-Provincial Youth Training Act, passed in May, 1939, continued the work with an increased grant of \$1,500,000 annually for three years.

Under the chairmanship of Dr. Fred McNally, the program in Alberta offered a wide selection of courses and activities for rural and urban youth of both sexes.

Subsequent expansion of the Program included in 1939 the provision for courses in aviation at the Institute of Technology and Art. Beginning on June 6, 1939, the aviation classes were conducted five and one-half days per week by a staff of ten instructors. Physical training and first aid courses were given to students in these classes.

Placement of the trainees was no problem as they

⁴⁷ Alberta, Department of Education, Annual Report, op. cit., 1938, page 9.

were in great demand by aircraft industries in Canada and England, and by the R.C.A.F., drafters of the aviation courses.⁴⁸

The first aviation course under the Plan was limited to Institute students who had already completed the two-year course in aeronautics. Twenty-five of the graduates of this course secured employment in Canadian and British aircraft factories; the remaining thirteen joined the R.C.A.F.⁴⁹

The second course was organized on July 24; the third on November 6. A total of 181 trainees graduated from the two courses as aircraft fitters, riggers, electricians, and wireless operator-mechanics. The majority of these graduates enlisted in the R.C.A.F.⁵⁰

Considered to have been more effective in the urban centers, the Youth Training Program in Alberta provided several thousand young people occupational training, health and recreational work, vocational training where possible, and placement.⁵¹

⁴⁸ Ibid., 1939, page 81.

⁴⁹ Provincial Institute of Technology and Art, Tech-Art Record, op. cit., 1939-40, page 12.

⁵⁰ Ibid.

⁵¹ Alberta, Department of Education, Annual Report, op. cit., 1938, page 10.

In addition to the service that it rendered to the many young people who had a "sense of discouragement and defeat", the Program, according to Dr. McNally, taught the Department of Education that "its responsibility is not fully discharged when it brings the boy or girl to the point where the school has no further contribution to make...."⁵²

III. STUDENTS

General

In the period 1929-1938 the average educational attainment of students on admission to the Institute rose from 8.8 grades to ten grades of public school education.⁵³ This increase in the average academic standing is interesting in view of the fact that between 1922 until the beginning of the Depression the average standing of students remained virtually unchanged at 8.8 grades. Evidently the Depression had not only the effect of greatly increasing attendance at high schools but also that of increasing student retention in them. Admission requirements at the Institute during this period, however, remained unchanged.

⁵² Ibid., page 11.

⁵³ Ibid., 1938, page 72.

The average age of students entering the Institute in 1938 was twenty-one years, slightly less than the 1929 figure of twenty-one years two months. The proportion of students from points outside Calgary decreased from 71.7 percent in 1929 to 65.2 percent in 1938.

Discipline and Scholarship Requirements

More attention appears to have been given in this period than previously to student achievement and discipline.⁵⁴ Regularity and punctuality in attendance were insisted on by the Institute. Students guilty of persistent tardiness were subject to payment of fines. If after paying fines a student failed to show more punctuality, he was subject to expulsion, as was a student whose general conduct was not considered to be in the best interests of the Institute. A truant was automatically eliminated from the privileges of the Institute.

Any student whose application to his studies or whose ability to profit by a selected course was inadequate was subject to dismissal. Expected to do a minimum of ten hours of homework weekly, every student was required to fulfill the requirements of the prescribed

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Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1929-30, 1938-39, passim.

reading courses before he was eligible to receive a diploma.

Students who failed written final examinations were given an opportunity to write supplemental examinations in the following year on payment of \$1.00 fee per paper.⁵⁵ The writing of supplemental examinations outside Calgary was permitted providing that presiding examiners were satisfactory to the Institute and that the examinations were written at the same time as those in Calgary.

Guidance and Placement

Supplementing extracurricular activities as a socializing influence has been the free moving about and conversation of students while at work.⁵⁶ Recognizing the importance of a student's social adjustment, the Institute staff has claimed to be successful in reclaiming some students who had become special problems.

"Amazing transformations", said Dr. Carpenter, had occurred in the appearance and outlook of many rural students.⁵⁷

⁵⁵ Ibid., 1938-39, page 10.

⁵⁶ The Calgary Herald, op. cit., January 29, 1938.

⁵⁷ Ibid.

The Principal recalled a student who for a time after his arrival at the Institute continued to wear chaps and spurs, to swagger about with a cowboy jauntiness and a determination not to let "city slickers" influence him. When he left the Institute about two years later, his cocksureness had disappeared, his clothing left nothing to be desired, and he had otherwise, too, developed into a most respectable citizen. On the other hand, if on entering the Institute a student did not have individuality, he would have one before leaving, claimed Dr. Carpenter.

Early in Dr. Carpenter's term as principal of the Institute a system of keeping personal records of students was established.⁵⁸ On a series of colored cards was kept a record of every job done by a student in the shops. Recorded also were his personality and aptitudes, analyzed beforehand by his instructors at staff meetings. Thus was obtained an approximation of a student's abilities, and brief word-picture of his personality.

Made available for inspection by prospective employers, the cards proved to be of great value when

⁵⁸ Emery Weal Annual, Provincial Institute of Technology and Art, Calgary, 1941-42, page 25.

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recommendations regarding students were made to them.

No reports of work of the placement committee between 1929-1937 were found. No doubt there was little the committee could have done, for shrinking industry left relatively few opportunities for apprenticeship.⁶⁰ In 1938, however, more students were reported to have secured jobs than in any preceding year since the beginning of the Depression.⁶¹ An increasing number of employers requiring help in services prepared for at the Institute were making calls for recommendations. A continued improvement in this respect occurred in the following year, particularly in the automotive department.

Certificates and Diplomas

The only available figures regarding day-class certificates issued by the Institute during the period 1929-38 were those for the 1930-31 term. They are as follows: special tractor, 11; battery and ignition, 5; welding, 4; and farm mechanics, 5. It has already been noted that special tractors and farm mechanics were

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Ibid.

60

Provincial Institute of Technology and Art, Tech-Art Record, op. cit., 1935-36, page 5.

61

Alberta, Department of Education, Annual Report, op. cit., 1937, page 78.

discontinued in 1932. Due to the discontinuation of farm mechanics and tractor courses in 1932, it may be concluded that the number of certificates issued after this date were few.

The diplomas issued in the same period were as listed in Table XI, page 214. An examination of enrolments in diploma courses and of the numbers of diplomas issued in the period 1929-39 reveals that approximately one-tenth of students enrolled in these courses received diplomas. A great increase over comparative figures for the period 1920-29, it appears that during the period of the Depression, the Institute, like the high schools, experienced an improvement in student retention.

Extracurricular Activities

A major effort of the Students' Association in the fall of 1929 was a revision of the Association's constitution to ensure better regulation of the Association's finances.

In February 1932 publication of the Emery Weal was discontinued for the reason that its financial interests clashed with those of the year book.⁶² Publications of the 1935-36 year book itself was delayed, a result of

⁶² Provincial Institute of Technology and Art, Tech-Art Record, op. cit., 1932-33, page 10.

TABLE XI
DIPLOMAS ISSUED IN THE PERIOD 1929 - 1939
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Course	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Dressmaking and Millinery	3	2	7	4	11	7	10	10	8	11	
Industrial Electricity	27	14	29	24	31	18	27	19	14	12	
Auto Mechanics	4	2		18	5	8	13	17	7	4	
Mechanical Engineering (Steam)	2	1	3	1							
Station Agents	5	3	2								
Tractor	1	19	3								
Survey Drafting		1		1			1	1			
Mechanical Drafting			1	2	2	3	1				
Architectural Drafting			1	1	2	2	1				
Elementary Art		1					5	4	4	18	
Aeronautics			2	7	4	5	4	1	10	3	
Machine Shop			2	1		1	2			1	
Fine Arts				5	5	1					
Geology and Prospecting									1		
Normal Art								1		2	
Building Construction											
Electricity and Radio								1	7	10	
Totals	46	43	50	65	61	45	67	58	59	61	

difficulties met in obtaining the required number of 300 subscriptions before work on the book could begin. The promising grain harvest in the fall of 1935 was believed to have accounted for the increased enrolment in the Institute's day classes, the continued publication of the year book, and the resumed publication of the Emery Weal in that year.⁶³

Each year the Tech-Art Record has been dedicated to a person or a group of people who, in most instances, has contributed to technical education in Canada. Of particular interest was the dedication of the 1938-39 issue to Mr. L.H. Bennett, prior to his retirement from the Institute staff in the following year.

In addition to having been a valuable member of the staff, Mr. Bennett was one of the earliest pioneers in the field of vocational education in Canada. An English-trained instructor in manual training, he came to Canada in 1899 under the Macdonald Manual Training Plan. Mr. Bennett was an instructor in the first teacher-training class for teachers of manual training in Canada. Moving West, he introduced manual training into the North West Territories, where as regional

⁶³ Ibid., pp. 8-16.

director of the Macdonald Program, he interested in the instruction of manual training a young rural-school teacher, Mr. J.C. Miller, who later became the first director of technical education in Alberta.⁶⁴ Mr. Bennett had been a member of the staff of the Institute since its opening in 1916, with the exception of a brief period when he served as an inspector of public schools. During the 1930's he contributed much to the organization of the then new general shop course offered in schools throughout Alberta.⁶⁵

The period 1929-39, saw a marked expansion in students' clubs and extracurricular activities, each under the supervision of a staff member.

An alumni association, formed in 1929, enjoyed a brief existence. The association assisted in preparing occasional class and Lit programs, and in discouraging former students of the Institute from "crashing the gate" at Institute dances. Upon payment of an annual membership fee of \$2.00, any former bona-fide member of the Students' Association for at least one month was entitled to share in the privileges of the alumni association. The privileges

⁶⁴ Bennett, op. cit., page 5.

⁶⁵ Alberta, Department of Education, Annual Report, op. cit., 1939, page 83.

included a one-year subscription to the club's weekly bulletin, The Ex Techonian, containing articles on recent developments in every area of instruction at the Institute.

To the boys' "Argonauts" social club established in the 1927-28 term was added the "Skookum Tillicum Club", the girls' counterpart in 1929. The latter was renamed the "I.O.T.A. Club" shortly afterwards. The new name signified that the members of the club belonged to a minority group at the Institute. One of the objects of the girls' club was to raise money for charitable purposes.⁶⁶

Music and drama received increased attention. A brass band organized in 1930 apparently did not survive. A dance orchestra, organized in 1932, was used to provide music at some Institute dances and dramatic productions. A string orchestra organized in 1933 and placed under the direction of Mrs. C.B. Paynter performed at dramatic presentations and annual banquets. The men's drama club, an outgrowth of the Argonaut Club, was organized in 1930. Affiliated soon afterwards with the I.O.T.A. Club, the drama club staged with marked success annual performances which varied from skits to three-act plays.

A wide range of athletic activities included foot-

⁶⁶ Ibid., 1935-36, page 21.

ball, baseball, tennis, hockey, quoits, boxing and wrestling, gymnasium, shooting, volley ball and basketball. Sports activities enjoyed a high degree of student participation. During the 1932-33 term almost all students were active in at least one sports activity.⁶⁷

The revised constitution of 1929 increased the number of executive terms from two to three - fall, winter and spring - to give more students experience in holding office and in election procedures. Other revisions called for the use of the proportional representation system of balloting, and the use of Bourinots' Rules of Order in the regular meetings of the Students' Council.

IV. BUILDINGS AND EQUIPMENT

With reduced enrolments during the 1929-39 period no expansion in building accommodation was carried out. The equipment, however, had begun to show results of use, and by 1936, much of it was in need of renewing.⁶⁸ As no grants for capital expenditures had been received by the Institute for four years, the shops were lacking in equipment that graduates were required to use in industry.

⁶⁷ Ibid., 1932-33, page 26.

⁶⁸ Alberta, Department of Education, Annual Report, op. cit., 1936, page 74.

Improvement in this situation began with the receipt of a Provincial grant for capital expenditures in 1937.

Through the cooperation of the machine-distributing companies, almost any machine in their possession was placed at the disposal of the Institute.⁶⁹ The International Harvester Company and the Caterpillar Tractor Corporation were particularly helpful in supplying demonstration material in the form of films and charts. Calgary's large automobile and electrical distributing companies were also cited for their cordial cooperation.

Beautification of the grounds was begun in 1928 when, during a city-wide tree planting campaign, students of the Institute planted several hundred trees on the hills in front of the School. In the following year the lawns in front of the main building were laid out. During the 1934-35 term a comprehensive scheme for the improvement of the grounds was initiated. Made possible by the work of the Forestry Branch at Oliver and by the Relief Department, several thousand trees and shrubs were planted. A golf course was planned, and bowling lawns were prepared and seeded.⁷⁰

⁶⁹ Ibid., 1938, page 73.

⁷⁰ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1935-36, page 5.

An elaborate plan by the Provincial Department of Public Works for landscaping the grounds increased the prospect for their beautification.

Evidently, however, work on the grounds was discontinued. By 1939 the grounds were in a "disgracful condition" and badly in need of attention.⁷¹ Dr. Carpenter strongly urged Provincial authorities to continue to completion the beautification of the grounds, a project which he considered to have been so well conceived and begun.

⁷¹ Alberta, Department of Education, Annual Report, op. cit., 1939, page 84.

CHAPTER VIII

THE ROLE OF THE INSTITUTE OF TECHNOLOGY AND ART IN CANADA'S WAR EFFORT (1939-1945)

I. THE WAR EMERGENCY TRAINING PROGRAM

In the summer of 1939 the introduction at the Institute of the Dominion-Provincial aeronautics courses drafted by the Royal Canadian Air Force marked a change in the objectives of the Youth Training Program - a change which was undoubtedly attributable to the gathering clouds of World War II.

Early in 1940 the Federal Government launched its War Emergency Training Program and invited the cooperation of the provincial governments.¹ Initially the Program was only an expansion of the Youth Training Agreement, but by the beginning of 1941 it was fully developed under the War Emergency Training Plan.² The War Emergency Training Program operated in all provinces between 1940 - 1945 except Prince Edward Island. All approved expenditures in the Program were borne entirely by the Federal Government.

The objective of the Program was to provide whatever

¹ Alberta, Department of Education, Annual Report, op. cit., 1940, page 8.

² Vocational Education in Canada, op. cit., page 27.

vocational training was needed in connection with the War. Trades training was provided for Armed Forces personnel and industrial workers engaged in war production. In addition to the extensive use made of shops in provincial and municipal vocational schools, special training centers were established in Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia.

In Alberta, as in the other provinces, the work of the War Emergency Training Program was turned over to organizations which had been conducting the work of the Youth Training Program. Technical high schools in Lethbridge and Edmonton were utilized for war emergency training during the summer of 1940.³ The Youth Training center in Medicine Hat was re-opened, and the centers in Edmonton and Calgary were adapted to training men for war industry.

II. PREPARATIONS AT THE INSTITUTE FOR THE PROVISION OF WAR EMERGENCY SERVICE

The role required of the Institute in Canada's war efforts was made clear by Dr. Carpenter in his statement that,

The war in which Canada finds itself is primarily one of machines and equipment.... Frantic efforts are being for materials, machines and men with which

³ Alberta, Department of Education, Annual Report, op. cit., page 8.

to provide the equipment for war.... This equipment has to be operated by men, maintained by men and replaced by men, the majority of whom, as young men, have to be trained.⁴

In the provision of such training, the Institute sought to aid Canada's war effort to the fullest.⁵

To the Dominion Provincial aeronautical classes were added soldiers' classes in motor transport and cooking. In the summer of 1940 the Institute buildings were taken over by the Federal Government for use by the R.C.A.F. as a wireless training school and technical classes were transferred to the grandstand building at the fair grounds of the Calgary Exhibition Association.⁶ Homemaking and art classes were transferred to the Coste mansion which as a result of tax arrears on it, had become city property. Normal School classes were moved to King Edward School. Thus the year 1940 was for the Institute one of considerable adjustment.

The transfer of equipment from the Institute began in August. Aeronautics classes started under handicaps resulting from the move on September 3, but the majority of classes did not begin until September 30, as planned. The small available space in the temporary quarters was elaborately partitioned with materials which, by reflecting sound,

⁴ Ibid., 1941, page 73.

⁵ Ibid.

⁶ The Calgary Herald, July 30, 1940.

aggravated shop noises. A complete heating system was installed and provision made for utilities such as gas, electricity, water and compressed air. This work was expeditiously carried out by the Provincial Department of Public Works.⁷

In comparison with the trying conditions in the grandstand building, however, accommodation in the Coste home was spacious and "superior," excelling that of the permanent home of the Institute.⁸

A further and important adjustment was required in the administration of the Institute. There can be no doubt that the hectic⁹ situation at the Institute's temporary location placed great demands on Dr. Carpenter's time and energy.¹⁰ These demands, in addition to those growing out of expanding Industrial Arts and Home Economics programs in Alberta schools, led Dr. Carpenter to make to the Department of Education an urgent appeal for assistance:

I cannot emphasize too strongly the need for assistance. A man for the boys' work and a woman for the girls' work are imperatively needed.

⁷ Alberta, Department of Education, Annual Report, op. cit., 1940, page 74.

⁸ Ibid., page 74.

⁹ Ibid., 1941, page 82.

¹⁰ Ibid., 1940, page 76.

It is impossible for one man to supervise the Technical Institute and at the same time give adequate service in the Province where 181 school centres are giving either full-time or part-time to the teaching of General Shop or Home Economics.¹¹

Dr. Carpenter's request was answered on July 1, 1941 by the separation of the offices of principal of the Institute and director of technical education.¹² On this date Mr. James Fowler, Vice-Principal of the Institute and a member of the original staff assumed duties as Principal. Dr. Carpenter continued as Provincial Director of Technical Education until his retirement in 1944 when he was succeeded by Mr. A.P. Tingley.

III. CURRICULUM

Intramural Technical Classes

As a result of recruitment for military service,¹³ and the opening of Youth Training and War Emergency Training programs in various Alberta centers,¹⁴ the 1940-1941 enrolment in regular day classes fell from 413 students in the preceding term to 295.¹⁵ Overall enrolment was swelled,

¹¹ Ibid.

¹² Ibid., 1941, page 82.

¹³ Ibid.

¹⁴ Ibid., 1941, page 82.

¹⁵ Ibid., 1940, page 74.

however, by the War Emergency Training classes and by October, 1940 it had been found necessary at the Institute to operate on a twenty-four hour basis. Time and enrolment were distributed as follows:¹⁶

(1) Regular students	8:30 a.m. to 4:00 p.m.	.....	295
(2) Regular evening classes	7:30 p.m. to 9:30 p.m.	...	263
(3) R.C.A.F. aero engines	8:00 a.m. to 5:00 p.m., Saturdays 8:00 to 12:00 noon	.....	51
(4) Calgary citizens (largely day-employed men)	7:00 p.m. to 11:00 p.m.	.....	145
(5) Special industrial group	11:00 p.m. to 7:00 a.m., Saturdays 2:00 p.m. to 6:00 p.m.	.....	163
Total		.....	917

The evening class of 145 Calgary men followed two programs: (1) metal, including bench fitting and filing, sheet metal and machine shop; (2) electricity, with emphasis on radio mechanics. The classes were conducted five days per week. Approximately 69 applicants for these courses were turned away for lack of accommodation. For the same reason, of 324 who applied for the all-night class, only 163 were accepted.¹⁷ Students in both the evening and all-night classes completed their courses in April 1941.

With the resumption of the Institute's regular classes

¹⁶ Ibid., page 75.

¹⁷ Ibid., 1941, page 74.

on September 20, most of the war emergency classes were transferred to the evening shift - 4:00 p.m. to midnight. The greatly increased enrolment in the latter courses as seen in Table XII, page 228 and the limited accommodation appear to have necessitated the transfer.

At about the same time evening classes in diesel engines, wireless operators (ground), and driver-operators were organized for army personnel drawn from various units. These courses, in addition to the regular evening program, made the evening enrolment (Table XIII, page 229) considerably heavier than that of day classes.

During November, in cooperation with the Calgary Contractors' Association, the Institute organized a program of evening classes for men in the building trades. A "most gratifying" response was obtained in the form of three classes of approximately twenty students each.¹⁸

In the year 1942 the work of the Institute closely followed the pattern established in the previous year.¹⁹ During the day shift the Institute's facilities were used mainly by regular civilian day students, somewhat of a reversal of the situation during the First World War. In the evening, priority was given to the War Emergency classes,

¹⁸ Ibid., page 87.

¹⁹ Ibid., 1942, page 73.

TABLE XII
ENROLMENTS IN DAY CLASSES 1939 - 1945
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Courses	Length of Course	1939 1940	1940 1941	1941 1942	1942 1943	1943 1944	1944 1945
Aeronautics	2 yr.	54	56	30	22	9	4
Art	1-4 yr.	33	31	52	32	42	61
Auto Mechanics	2 yr.	87	60	28	12	7	18
Automotive Electricity	5 mo.	22	4	4	5	6	3
Building Construction		13	6	3			
Drafting, Mechanical	2 yr.	7	6	3	13	5	3
Diesel Engines	5 wk.	8	8	3	1	9	4
Dressmaking and Millinery	2 yr.	41	27	21	16		
Electricity	2 yr.	69	43	34	20	22	24
Farm Construction	5 mo.	33	12	6			
General Shop						1	
Machine Shop	2 yr.	19	21	29	19	10	8
Mining	4 wk.	3		7			
Radio Servicing	1 yr.	10	4		11	10	16
Summer School (Calgary)	5 wk.	208					
Summer School (Banff)	3 wk.	45	59	73	77	74	135
Welding, Electric	3 wk.	1					
Welding, Acetylene	3 wk.	65	38	37	43	24	23
Drafting, Survey	2 yr.	3					
Tractors	10 wk.	33	18	17	19	34	40
Aeronautics (D.P.)		181					
* Tractor Mechanics	10 wk.		11	11	10	28	25
War Emergency Courses			215	104	100		
Army Classes					72		
Carpentry					2	4	
Sheet Metal (Aeroplane)				30			
Building Construction and Drafting	2 yr.					3	12
Canadian Vocational Training						47	
Commercial Wireless	10 mo.					14	15
Dressmaking						12	18
Farm Construction and Mechanics	5 mo.					9	11
		935	619	492	474	370	420

* Requisite for this course was the ten-week Tractors course.

TABLE XIII

ENROLMENTS IN EVENING AND NIGHT CLASSES 1939 - 1945
 PROVINCIAL INSTITUTE OF TECHNOLOGY
 AND ART

Courses	1939	1940	1941	1942	1943	1944
	1940	1941	1942	1943	1944	1945
Aeronautics	30	31				
Art	20	30	21	46	72	91
Auto Mechanics	13	26	15	12		14
Drafting, Mechanical	15	12	23	44	18	10
Dressmaking and Millinery		12	24	53		
Electricity		9			16	
Machine Shop	25	14			16	17
Radio Servicing	17					11
Show Cards	11	13	13	14		
Welding, Acetylene	18	14	33	42	13	11
Oil Chemistry	12	14	15	18	18	23
Photography	10					
Code	17	9				
Motor Tune-up	9					
Soldiers' Cooking	56					
Soldiers' Motor Transport	323					
Plumbing	12	9	10	12		
War Emergency		323	416	324		
Army			213			
Building Trades			22			
Carpentry			10		18	35
Drafting, Metal			15			
Estimating			15			
Drafting, Building				14		
Building Construction and						
Drafting						11
Canadian Vocational Training					122	
Dressmaking					37	51
Craftwork						13
Totals	588	516	845	579	330	287

with the result that certain civilian evening classes, notably machine shop, radio servicing and electricity were cancelled.²⁰

The operation of the Institute during 1943 was largely unchanged.²¹ Throughout the summer months only a single-shift program was conducted as no regular civilian day students were in training during that period. The R.C.A.F. classes, however, both in shop work and in theory, were carried on even during the week of the Calgary Exhibition and Stampede.

The 1943 enrolment in War Emergency classes declined from the 1942 figure of 520 to 424, the second decrease since 1941. On the basis of information received by the Institute from Ottawa, these classes were expected to be concluded during the summer of 1944.

The aeronautics department was hard hit by the Federal Government's grounding of all privately owned aircraft.²² Although an important source of jobs for the aero shops was thus lost, the Institute loaned a sufficient number of aircraft from the R.C.A.F. to enable students to practice rigging, repairing, and maintenance of airframes.

At the Coste House enrolments in day and evening classes in art and dressmaking were well maintained, reflecting

²⁰ Ibid.

²¹ Ibid., 1943, page 77.

²² Ibid., page 80.

a desire on the part of many people to utilize their leisure time for self-expressive and economic reasons.²³

The last class of students to be trained under the War Emergency Training Program graduated in July of 1944, bringing the number of students trained at the Institute for the R.C.A.F. and war industry to 2,181.²⁴

An important characteristic of training provided under the War Emergency Training Plan was the narrowness of the curricula. With the commencement of War Emergency training at the Institute, emphasis shifted as it did during World War I, from the education of the individual to the "magnification of what an individual may be taught to do in a minimum of time."²⁵ Dr. Carpenter concluded that,

This is a good way to win a war, but a poor way to educate.²⁶

The Art Department

In the spring of 1942 new ground was broken in the art department by the organization of a Saturday morning art class for children. The response was encouraging and some "very interesting" work was done.²⁷ A similar class

²³ Ibid., page 78.

²⁴ Ibid., 1944, page 62.

²⁵ Ibid., 1940, page 75.

²⁶ Ibid.

²⁷ Ibid., 1942, page 77.

was organized in the fall. It was anticipated that these classes would act as "feeders" to the Institute's art department as well as to the art section of the Banff School of Fine Arts.²⁸

Art work in the fossil house in the Calgary Zoo was designed and carried out by three students of the Art Department: Margaret Shelton did the mural painting, Gerda Christoffersen did the foreground modeling, and Clifford Robinson made a number of small models of prehistoric birds.

In the same year both Mr. Glyde, head of the art department, and Mr. W. J. Phillips, R.C.A., who joined the department in the previous year, had paintings hung by the Royal Canadian Academy and by the Montreal Art Association. Mr. Glyde was elected an Associate member of the Royal Canadian Academy. His painting, "The Coach," was acquired by the Toronto Gallery for its permanent collection.

Numerous art exhibitions were held during the year at the Coste House. Exhibited was work by students and staff members of the Institute's art department as well as selections from various art societies in Eastern Canada. To further stimulate public interest in "traveling" and local exhibitions was the reason for the establishment in 1942 of

²⁸ Ibid.

the Calgary Art Association.²⁹ Moreover, it was from the repeated exhibitions of the art and dressmaking classes at the Coste House that the Calgary Allied Arts Council evolved.³⁰

In spite of the War, the art department continued to attract students from an ever-widening area. Attending an increase in enrolment in 1944 was a noticeable increase in talent and enthusiasm in each branch of the department's curriculum.³¹ Graduates of the art department were making a "definite impact" on commerce and industry, for a considerable number of graduates were now worthy of recognition as commercial artists.³²

Enrolment in the art section of the Banff School of Fine Arts likewise increased throughout the War years (Table XII). In the summer of 1942 the enrolment of 73 students set a record up to that time. Many of the students were professional artists and teachers from distant points both in Canada and the United States. In spite of travel restrictions the enrolment in the following year was even larger. The art section under Messrs. H.G. Glyde, W.J. Phillips and A.Y. Jackson, was numerically the largest section of the Banff

²⁹ Ibid.

³⁰ The Albertan, Calgary, July 7, 1948.

³¹ Alberta, Department of Education, Annual Report, op. cit., 1944, page 65.

³² Ibid.

School for the second year in succession.³³ At the 1944 session the enrolment swelled to a record-breaking 135 students. The exhibition of students' work held at the close of the term was up to this time, probably the most successful in the history of the School.³⁴

Correspondence Instruction

As in the art department, enrolments in the department of correspondence instruction during the period 1939 - 1945 continued to increase.

TABLE XIV

ENROLMENTS IN CORRESPONDENCE COURSES 1939 - 1945 PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1939	1940	1941	1942	1943	1944
	1940	1941	1942	1943	1944	1945
Mining	62	43	48	57	92	105
Steam	109	110	141	155	200	185
Totals	171	153	189	212	292	290

During the war years many students of the Institute's correspondence department enlisted or otherwise changed their

³³ Ibid., 1943, page 79.

³⁴ Ibid., 1944, page 64.

occupations. The majority of students receiving instruction in steam enlisted in the Navy and in almost every one continued with his correspondence course.³⁵ Such was not the case with the mining students, however, many of whom left the mining vocation entirely.

A number of Navy steam engineers not previously registered in the Institute's steam course enrolled through the Canadian Legion's Educational Service whose bulletins listed the Institute's correspondence courses. The fee charged enlisted men was one-half of the usual. By 1943 one-fifth of the total enrolment in steam engineering consisted of Air Force and Navy personnel.³⁶

The Correspondence Branch of the Manitoba Department of Education continued to use the steam engineering courses from the Provincial Institute of Technology. In Saskatchewan the courses were recommended to students there by the Saskatchewan Boiler Inspection Department. The mining courses from the Institute of Technology were used as texts in the Nova Scotia Technical College and recommended to mining students in British Columbia by that province's Department of Mines.³⁷

³⁵ Ibid., 1942, page 74.

³⁶ Ibid., 1943, page 78.

³⁷ Ibid., 1944, page 63.

Started before the outbreak of war, the revision of some of the steam and mining courses was completed by 1943. The purpose of the revisions was to bring the courses up-to-date with changes in Acts and regulations concerning them. Revision of the second class mining and third class steam courses was completed in the following year. All new and revised courses were printed by the multilith process, a great improvement over the mimeographing method used previously.³⁸

Summer School For Teachers of Industrial Arts

As already noted, regular full-term classes for teachers of industrial arts were not resumed in the fall of 1939. Similarly, summer sessions at the Institute were discontinued after the 1939 session (Table XII). Courses in general shop and home economics were continued, however, in Calgary schools other than the Institute of Technology.³⁹

To the teachers attending them, the summer sessions offered mainly "manipulative experience."⁴⁰ In the 1939 session, Mr. L.H. Bennett delivered a one-hour lecture each day on the philosophy, psychology, objectives and methodology as applied to shop instruction. Dr. Carpenter valued such

³⁸ Ibid., 1947, page 85.

³⁹ Ibid., 1940-45 passim.

⁴⁰ Ibid., 1939, page 80.

lectures and recommended that more attention be given to this phase of instruction in the preparation of shop teachers.⁴¹

IV. RETRAINING OF WAR VETERANS UNDER THE CANADIAN VOCATIONAL TRAINING PROGRAM

Even before the work of the War Emergency Training Program ended, the rehabilitative training of war veterans began under its successor, the Canadian Vocational Training Program. Enrolled in the 1943-1944 term at the Institute were 47 veterans in day, and 122 in evening classes.

Canadian Vocational Training, since its appearance in 1937 as the Dominion-Provincial Youth Training Agreement, has been a cooperative enterprise of the federal and provincial governments, carried out through their departments of Labour and Education respectively.

In Alberta, work under the Agreement until 1953 was directed by Mr. J.H. Ross. Each regional (provincial) director was responsible to the Vocational Training Advisory Council, established under the Vocational Training Co-ordination Act. Through the regional directors, the council, consisting of seventeen members representing all Canadian provinces, exercised general supervision over all activities of Canadian Vocational Training.

⁴¹ Ibid.

The Program was authorized by the Vocational Training Co-ordination Act of 1942 under which Assistance provided had no fixed duration, nor fixed sums. The Act was an enabling one, designed to provide authority for whatever types of vocational training might be considered necessary or desirable, either during the War or in the postwar period.⁴²

The Act authorized the Federal Minister of Labour to undertake solely at Dominion expense the training of workers for war industry, tradesmen for the armed forces, and training for discharged veterans approved for training by the Department of Veterans Affairs. It authorized him, also, on the approval of the Governor General in Council, to enter into an agreement with any province to provide, for an indefinite period, financial assistance for the following:

- (a) Continuation of projects formerly carried on under the Youth Training Agreement.
- (b) Vocational training projects for the conservation and development of natural resources.
- (c) Training of industrial apprentices and supervisors.
- (d) The development of vocational training at a level equivalent to secondary school level.
- (e) The training of unemployed civilians who had been previously gainfully employed, (provided that the Dominion

⁴² Vocational Education in Canada, op. cit., page 26.

expenditures for these five types of training were matched by provincial expenditures of equal amount).⁴³

Specifically, the training of veterans at the Institute of Technology fell under the authority of the Re-establishment Training Agreement. The training of veterans under this Agreement made use of about 100 private trade schools, 200 privately-owned business colleges, 60 provincially or municipally-owned schools, and 75 special veterans' training centers throughout Canada. Use was made also of vocational correspondence courses, and substantial numbers of veterans were trained on-the-job by employers in industry. Although the costs of work carried out under Canadian Vocational Training agreements have generally been shared equally by the federal and provincial governments, the retraining of veterans was entirely a Federal responsibility.

V. STUDENTS

General

As a result of wartime conditions the average age of students enrolled at the Institute dropped. During the greater part of the period the Institute served students mainly in the 16 to 19 year age group.⁴⁴ In attendance

⁴³ Ibid.

⁴⁴ Alberta, Department of Education, Annual Report, op. cit., 1942, page 75.

also was a small proportion of students who were overage for military requirements. One of these students in the 1942-43 term was in his seventieth year.

In the correspondence department, too, a remarkable feature was the number of elderly men who had resumed studying after a long period of absence from it.⁴⁵ This was probably due to the scarcity of skilled workers exerting pressure on the militarily unfit or overaged to fill places left vacant by enlisted men.⁴⁶ One such vacancy was a position requiring a first-class power plant engineer, a position filled by a formerly retired engineer eighty-three years of age.

Placement

Although the Institute endeavored to find employment for its graduates before 1939, it was not until the fall of that year that a placement service was organized.⁴⁷ A member of the Institute staff, Mr. F.G. Young, who had studied placement methods at Columbia University, was appointed placement officer.

On the one hand the placement officer attempted to

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ The Calgary Herald, September 6, 1941.

determine the type of employment for which a student was best suited. This was done through interviews with the student, by a study of his records, and by consultation with his instructors. On the other hand, the placement officer examined the employment situation, endeavoring to determine the needs of employers. Through judicious selection of employees, the Institute established a cordial relationship with employers, who in many cases came to depend upon the recommendations of the Institute in obtaining certain types of employees.⁴⁸

With the outbreak of War the employment picture changed overnight.⁴⁹ The demand for technically trained men and women in the armed forces and in war industry grew so great that many of the Institute's students quit their studies to take lucrative employment even before they completed the first year of their course.⁵⁰

Certificates and Diplomas

One hundred sixty-five diplomas were issued in the period 1939-45 (Table XV, page 243) as compared with 351 (Table XI) issued in the preceding six-year period. An

⁴⁸ Ibid.

⁴⁹ Emery Weal Annual, Year-Book substitute, Provincial Institute of Technology and Art, Calgary, 1941-42, page 25.

⁵⁰ Ibid.

examination of enrolments in diploma courses for these periods reveals a negligible increase in the number of diplomas issued in proportion to enrolment. Reason for the Institute's failure to graduate a larger proportion of students during wartime doubtlessly included the great demand for skilled workers and the opportunities for lucrative employment.

Figures for certificates issued for successful completion of day courses were not available for the 1939-1940 and 1940-1941 terms. Certificates issued between 1941 and 1945 were as shown in Table XVI, page 243.

Figures for certificates issued by the correspondence and evening class departments during the war period were available only from 1942 onward. A comparison of enrolments and all certificates issued between 1943 and 1945 shows that although the total attendance in the 1944 - 45 term was almost the same as that in the preceding term, the number of certificates issued was considerably greater. An even larger increase occurred in the number of diplomas issued in the 1944-1945 term. It would appear that the problem of drop-outs had begun to be less serious.

TABLE XV

DIPLOMAS ISSUED IN THE PERIOD 1939 - 1945
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1939	1940	1941	1942	1943	1944
	1940	1941	1942	1943	1944	1945
Dressmaking and Millinery	10	5	8	3	1	5
Industrial Electricity	10	12	8	8	4	2
Auto Mechanics	11	12	3	2	1	1
Drafting, Mechanical	1	1				
Elementary Art	1			3	2	6
Aeronautics	8	7	8	1	2	
Electricity and Radio	4	1		1		
Elementary and Normal Art	1				1	
Building Construction and Drafting			2			
Machine Shop			1	1		
Applied Arts and Crafts			3			
Fine Art				1		
Advanced Art						3
Totals	46	38	33	20	11	17

TABLE XVI

CERTIFICATES ISSUED FOR DAY COURSES IN THE PERIOD 1941 -1945
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1941	1942	1943	1944
	1942	1943	1944	1945
Welding	42	48	21	32
Tractors	19	13	26	53
Tractor Mechanics	10	9	26	21
Diesel Engines	3	2	8	2
Farm Construction and Mechanics	2		3	5
Aircraft Sheet Metal	14			
Auto Electricity	2	3	2	1
Radio Servicing		5	4	5
Commercial Wireless Operating			3	4
Totals	92	80	93	123

TABLE XVII

COMPARISON OF ENROLMENTS AND CERTIFICATES ISSUED
IN ALL CLASSES 1943 - 1945
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

	1943 - 1944		1944 - 1945	
	Enrol.	Certif.	Enrol.	Certif.
Day Classes	370	93	420	123
Evening Classes	330	54	287	80
Correspondence Classes	292	41	290	35
Totals	992	188	997	238

Extracurricular Activities

Early in the period Dr. Carpenter reported that the application and industry of students at the Institute was never better.⁵¹ He noted too that during the 1940 - 1941 term there had been fewer problems in discipline than in any other period during his seventeen years as principal at the Institute.

In the area of extracurricular activities the Institute did not fare as well. Notwithstanding increasing difficulties which arose from overcrowding in the Institute's wartime quarters, extracurricular activities were, however, well maintained.⁵²

⁵¹ Alberta, Department of Education, Annual Report, op. cit., 1940, page 75.

⁵² Ibid., 1941, page 87.

The Literary Society carried on its activities in a space bounded on three sides by Morse code classes, separated from them by partial partitions only.

Finding accommodation for activities of the orchestra, drama club and the choral society was difficult. Hockey games were played on a public rink. Social evenings arranged by the Students' Association were held in rented quarters. Up to the end of 1942 no suitable facilities had been found for inter-class basketball and volleyball. The shooting club too was without accommodation.

The twentieth annual banquet held at the Palliser Hotel on February 6, 1942 was rated highly successful. equally high praise was given the choral society, the orchestra the drama club and the Emery Weal staff for their work in the 1941 - 1942 term.⁵³ In May, athletic activities were brought to a culmination in a track and field meet at Bowness Park.

At the beginning of the 1942 - 1943 term, the staff organized a picnic to provide new students an opportunity to become acquainted with each other. The picnic was expected to become an annual event.

An outstanding extracurricular event of the 1942 - 1943

⁵³ Ibid., 1942, page 76.

term was the staging by the choral society of the operetta "Hulda of Holland" in the auditorium of Central School. An attendance of 820 persons left standing room only. Credit for the society's "outstanding success" was due chiefly to a member of the Institute's instructional staff, Mr. N. Safran, who had been directing the work of the choral society for several years.⁵⁴ Assisting Mr. Safran was Mr. O. Kingsep, also a member of the Institute teaching staff, who, in addition playing the leading role in the operetta, acted as business manager of the production. Acknowledgements were extended to the dressmaking and art departments for their work in preparing costumes and stage settings.

The reduced enrolments throughout the war years created a shortage of talent for the weekly programs (Lits) of the literary society. During the 1943-1944 term the Institute's instructors sponsored each alternate program. This arrangement was maintained in the following term.

Another result of decreased enrolments was the discontinuation of the year book in favor of a less-expensive substitute, the Emery Weal Annual.⁵⁵

⁵⁴ Ibid., 1943, page 79.

⁵⁵ Emery Weal Annual, op. cit., page 7.

The publication of the Emery Weal, the students' newspaper, was continued with the printing of several issues annually.⁵⁶

In the latter years of the War extracurricular activities were bolstered by the arrival of returned war veterans, many of whom provided excellent leadership in them.⁵⁷

VI. BUILDINGS AND EQUIPMENT

Shop work in the mechanical departments continued to be based largely on the repair and overhaul of privately-owned equipment. To the students the knowledge that such equipment was intended to be put back into use provided a high degree of motivation.⁵⁸ As the War progressed and new machinery for civilian use became more difficult to obtain, the Institute was offered many more jobs than it could handle. The result was a desirable one for the Institute, as it could choose the jobs which would provide students with experiences of greatest educational value.⁵⁹

Inadequate efforts to replace worn out and obsolete

⁵⁶ Alberta, Department of Education, Annual Report, op. cit., 1940 - 1945 passim.

⁵⁷ Ibid., 1944, page 63.

⁵⁸ Ibid., 1944, page 65.

⁵⁹ Ibid., page 66.

equipment were continued in 1941 with the allocation of \$2,000.00 for this purpose.⁶⁰ Prospects for further improvement in the equipment situation appeared in October, 1943 when Mr. J.H. Ross, Regional Director of the War Emergency Training Program in Alberta, requested the Institute staff to prepare a list of the tools and equipment required by the Institute in its permanent home after the War.⁶¹ The task was a difficult one in view of the fact that a number of heads of departments were away on active service and therefore not available to offer assistance in postwar planning.⁶²

Equipment in the machine shop had become obsolete and so badly worn that it was impossible to do first-class work with it.⁶³ Equipment in every other department was in similar condition, as much of the Institute's equipment was nearly thirty years old, and little had been done to replace pieces as they became obsolete. As a result, instead of leading industry, the Institute was "too often far behind" industrial practice, and, therefore, graduates were placed

⁶⁰ Ibid., 1941, page 87.

⁶¹ Ibid., 1943, page 81.

⁶² Ibid.

⁶³ Ibid., 1944, page 66.

under certain handicaps when they entered employment in industry.⁶⁴ A complete new set of machine shop equipment was considered to be the Institute's most urgent requirement.

As the War entered its final year, rumors circulated to the effect that the Institute would soon be closed and its facilities turned over to other uses.⁶⁵ Training centers of the Youth Training Program had attracted many young men and women who otherwise would have attended the Technical Institute.⁶⁶ Combined with adverse effects inflicted on the Institute by the War Emergency Training Program, the result was, for the Institute, a "loss of prestige and accumulated desirable status."⁶⁷ Perhaps the closing down in 1944 of Edmonton's Technical High School and plans to replace it with a large composite high school provided more credibility to the rumors.⁶⁸ It seems strange, indeed, in view of the Institute's twenty-eight years of uninterrupted service, and of the plans being made in Ontario, Manitoba

⁶⁴ Ibid.

⁶⁵ Ibid., 1943, page 74.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

and British Columbia to establish schools similar to the Institute,⁶⁹ that its continued existence did not appear to be entirely assured.

⁶⁹ Ibid., page 76.

CHAPTER IX

POSTWAR GROWTH AND DEVELOPMENT OF THE INSTITUTE

I. THE VOCATIONAL SCHOOLS' ASSISTANCE AGREEMENT

The dejection expressed by Dr. Carpenter regarding the future of the Institute can be understood in view of the circumstances into which the War placed it. Any doubts regarding the Institute's continued existence were soon swept away, however, by a flurry of Federal and Provincial activity which gave the entire field of vocational education in Canada stimulus and promise such as it had never before enjoyed.

The broad scope of the Vocational Training Coordination Act of 1942 made possible its ready adaptation to the nation's changing needs in vocational education. The Youth Training Plan was conveniently expanded to include war emergency training. As the demands of the War Emergency Training Program declined and veterans of the Armed Forces began to return to civilian life, war emergency training gave way to veterans' re-establishment training.

Reorientation of vocational education to meet postwar needs was accompanied by a further implementation of the Vocational Training Coordination Act, in the form of the

Vocational Schools' Assistance Agreement.¹

Authorized by an Order in Council (PC1648) in March, 1945, the Agreement contained plans drafted by the Vocational Training Advisory Council for Dominion financial assistance to the provinces for the extended provision of vocational education.² Soon completed with all provinces, the Agreement was effective from April 1, 1945, and was to remain in effect for a period of ten years. Administration of work carried out under the Agreement was made the responsibility of Canadian Vocational Training.

By the Agreement, the Federal Government provided assistance as follows:

- (1) To each province an outright grant of \$10,000 which did not have to be matched by provincial expenditures.
- (2) An annual sum of \$1,910,000 divided among the provinces in proportion to population in the 15-19 year age group.
- (3) An allotment of \$10,000,000 for capital expenditures--provision of vocational schools and equipment. At least 25 percent of the allotment was to be used for the provision of capital equipment. The distribution of this grant among the provinces was on the same basis as that of the annual allotment. To qualify for Dominion contributions, provincial expenditures for buildings and equipment had to be made before March 31, 1952.

¹ Vocational Education In Canada, op. cit., page 30.

² Ibid.

The Agreement specified, further, that Dominion contributions to the annual allotment (2) and the capital grant (3) were to be matched by provincial expenditures of equal amounts. To qualify for Dominion assistance under the Agreement, a course was to be so arranged as to allow 50 percent of class time for purely vocational subjects and related technical subjects such as science, mathematics, and drafting.³

Only schools of secondary level or its equivalent were eligible for assistance. Excluded from assistance were courses of university grade, manual training and pre-vocational classes, and any classes below Grade IX.

An immediate result of the Agreement was a very great increase in the number of plans submitted for new vocational schools or additions to existing ones.⁴ Dominion contributions in the ten-year period assisted in building and equipping approximately 105 schools, of which about 50 were the composite type.⁵

At the Institute of Technology and Art, the Agreement

³ Ibid.

⁴ Ibid., page 31.

⁵ Ibid.

was viewed with optimism, as expressed by the Institute's Principal, Dr. Fowler, in his conclusion that "the Institute is at the beginning of a new and great era in its service to the young men and women of the Province of Alberta."⁶

II. THE APPRENTICESHIP AGREEMENT

Another implementation of the 1942 Vocational Training Coordination Act which was to have a profound effect on the Institute was the Apprenticeship Agreement.

Although the number of formal apprenticeship programs in Canada increased gradually in the early postwar period, the rate of growth of these programs, particularly in the manufacturing industries, was inadequate to meet Canada's needs for skilled manpower.⁷ In April, 1956 the Economics and Research Branch of the Federal Department of Labour conducted a survey of trades training in 7,360 establishments in four industries: mining, manufacturing, transportation and communication, and public utilities. The survey revealed that only 28 percent of the establishments had organized

⁶ Emery Weal Annual, *op. cit.*, 1945-46, page 5.

⁷ Apprenticeship In Manufacturing, Information Branch, Department of Labour, Ottawa, 1960, page 5.

trades training programs.

To assist in providing Canadian industry with skilled workers, the Federal Government in cooperation with most Canadian provinces launched programs for the training of apprentices. The enterprise was authorized by the Apprenticeship Agreement which came into operation on April 1, 1944. By terms of the Agreement, all approved costs of training were to be borne equally by the federal and participating provincial governments.

In Alberta, an immediate result of the Agreement was the passing of the Apprenticeship Act, which became effective in January, 1945.⁹ The passing of the Act resulted largely from recommendations of the Sub-committee on Industry of the Alberta Postwar Reconstruction Committee.¹⁰

In their report, issued in March, 1945, the sub-committee viewed apprenticeship as a training ground for future executives as well as a method of producing journeymen. In the words of the sub-committee:

Until such time as educational science produces a type of education equal to the products of existing

8

Vocational Education in Canada, op. cit., page 23.

9

Ibid.

10

A Modern Concept of Apprenticeship, Information Branch, Department of Labour, Ottawa, 1957, page 3.

experience, it will be obvious that the only means whereby the student aspiring to executive position may acquire a working knowledge of the problems of labour will be through experiencing those problems himself. Therefore, it is the opinion of this sub-committee that the apprenticeship system, for the time being, must provide such experience for all who enter industry....¹¹

Further in their report, the sub-committee point out that methods of mass production do not train youth in the broad practices of the skilled crafts. Their allegation was given support by the Department of Labour's survey in 1956, which found also that in the opinion of executives of most of the industrial establishments surveyed, competence in a skilled trade was best ensured by a system of apprenticeship which combined scheduled training on the job with related theoretical training in the classroom.¹²

In the matter of competence in the trades, the principle of qualifying a journeyman through his passing of practical and written examinations was established in Alberta by the Tradesmen's Qualification Act in 1936.¹³ Although it requires the attainment of standards of proficiency in the trades to which it applies, the Act does not make provision for the training required by prospective

¹¹ Ibid.

¹² Apprenticeship in Manufacturing, loc. cit.

¹³ A Modern Concept of Apprenticeship, op. cit.,

tradesmen to attain the necessary standards. The Apprenticeship Act, however, does provide for the organization of such training.¹⁴

As required by the Apprenticeship Act, the Provincial Apprenticeship Board, representing labour, employers and the Provincial Government, was established to administer and regulate the apprenticeship program. Representatives from employers and labour were likewise appointed to local and provincial advisory committees established for each of the designated trades.

The chief function of the local advisory committees is to hear complaints of employers and apprentices in matters regarding the training of apprentices and to make recommendations pertaining to the complaints to the Provincial Apprenticeship Board.¹⁵

Each provincial advisory committee has been established on the recommendation of members of the trade concerned, and consists of two representatives from its corresponding local advisory committees. Each provincial committee makes regulations concerning the trade or trades

¹⁴ Ibid.

¹⁵ Ibid., page 10.

it represents in the following matters:

1. qualifications concerning the age of apprentices;
2. length of time for apprenticeship;
3. the number of apprentices who may be apprenticed to each employer;
4. the content of the courses to be given at the trades-training school or center;
5. the establishment of standards of proficiency to be reached during each year of apprenticeship and the setting of the final standard of competency upon which journeyman status is granted; and
6. to conduct such practical tests and written examinations as may be deemed necessary to prove attainment of the desired standards.¹⁶

Thus through representation on the Provincial Apprenticeship Board and the advisory committees, industry exercises a large measure of control over the apprenticeship program.¹⁷

One of the first duties of the program's director since its inception, Mr. James P. White, was to arouse in industry interest in the adoption of apprenticeship in the trades. By June, 1945, only two months after Mr. White's appointment as director, local and provincial advisory committees had been formed for each of the following trades: bricklaying, carpentry, electrical, painting, plastering,

¹⁶ Ibid.

¹⁷ Ibid.

plumbing, and sheet metal working.¹⁸ As support for the apprenticeship program grew, applications for designation under the terms of the Apprenticeship Act were received from other trades.

III. APPRENTICESHIP TRAINING AT THE PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

The first courses for apprentices commenced in the autumn of 1945 in schools used for the retraining of war veterans, since most apprentices who were to commence training under the Apprenticeship Act were veterans.¹⁹ However, as the training of these men under the Re-establishment Training Agreement dropped off, the closing of the Canadian Vocational Training centers began.²⁰ By 1948 the only Alberta center to remain in operation was the one in Calgary.

As it became impossible for the Calgary center to provide training for all Alberta apprentices, the Department of Education made available the facilities and staff of the Institute of Technology, relocated in its permanent home

¹⁸ Ibid., page 11.

¹⁹ Ibid.

²⁰ Ibid., page 13.

since 1946, to assist in this work.²¹

In December, 1947, Mr. Fowler, Principal of the Institute, was made a member of the Alberta Apprenticeship Board. Mr. Fowler considered it important that the staff of the Institute of Technology also be represented on the Board in order that the instructors have first-hand information on its plans and policies. He pointed out too that the short-course training of apprentices should not be allowed to "interfere with or detract from the longer courses developed by the Institute and with which is associated a comprehensive scheme of extracurricular activities....."²²

The training of apprentices at the Institute began at the end of the Institute's regular term in May 1948. The enrolment which consisted of apprentices from only the auto body repair trade was small (Table XVIII, page 261) due to the large demand for service in this trade and the consequent difficulty of releasing apprentices for school training.²³

Reluctance of employers to release apprentices for

²¹ Ibid.

²² Alberta, Department of Education, Annual Report, op. cit., 1947, page 97.

²³ Ibid., 1948, page 78.

TABLE XVIII

ENROLMENT OF APPRENTICES IN THE PERIOD 1948-1961
AND A COMPARISON OF THESE TOTALS
WITH THOSE FOR INSTITUTE DAY COURSES
IN THE SAME PERIOD
PROVINCIAL INSTITUTE OF TECHNOLOGY
AND ART

Trade	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Auto Body Repair	42	100	107	95	135	273	221	193	190	195	198	229	216
Carpentry		24	39	42	66	120	84	108	149	189	215	238	201
Electrical		56	182	187	286	432	362	399	420	460	520	521	557
Motor Mechanics		60	258	287	700	929	676	698	751	807	839	874	942
Sheet Metal			24	37	36	48	90	144	164	180	210	228	233
Radio					10	9	2			1	1	46	68
Refrigeration						3	3			42	44	14	30
Machine Shop									36	12	30	53	44
Cooks										5	4	24	25
Lathers											10	27	75
Heavy Duty Mechanics												3	
Millwrights													
Totals for Enrolment in Apprentice Courses	42	240	610	648	1233	1914	1238	1542	1710	1891	2071	2238	2391
Totals for Enrolment in Institute Day Courses	672	792	584	645	681	690	726	858	855	1006	1245	1368	1600

Enrolments prior to the 1956-57 term were taken from Annual Announcements of the Institute of Technology. Enrolments after this date were taken from Annual Reports of the Department of Education, Alberta.

school training resulted also in the reduction of the annual three-month period asked for by provincial advisory committees for such training.²⁴ In some instances the annual periods of training at school were temporarily reduced to as little as one month.

Evidently the newly-acquired function of training apprentices was received at the Institute with apprehension. Beginning in 1948, annual reports from the Institute to the Department of Education repeatedly brought to the latter's attention the function of a technical institute.²⁵ In his report on the Institute's 1948-1949 term Mr. Fowler, quoting the (American) Society for the Promotion of Engineering Education's definition of technical education, wrote,

It is a school of post-secondary character but distinct in character from a college or a university. Its purpose is to train young men and women for callings and functions that occupy an area between the skilled trades and the highly scientific professions.²⁶

In his own words Mr. Fowler added that a technical institute, in training the foremen and supervisors of industry, was required to provide not only all the skills of a given trade,

²⁴ A Modern Concept of Apprenticeship, op. cit., page 10.

²⁵ Alberta, Department of Education, Annual Report, op. cit., 1948-1960 *passim*.

²⁶ Ibid., 1948, page 76.

but a sound technological background on which the trade is based.²⁷

In a later report Mr. Fowler contended that the purpose of apprentice courses was only to train journeymen.²⁸ There exists an apparent contradiction between his contention and the purposes of the apprenticeship program as outlined by the Provincial Sub-committee on Industry in 1945. Furthermore, the Commission on Calgary College recommended that courses at the trade level be offered at the proposed institute of technology and art, and until the advent of apprentice training at the Institute, trade courses had been offered here without evident objection. Dr. Carpenter had suggested that the training of tradesmen be the second function of the Institute, next in importance to the training of technicians.

A comparison of enrolments in Institute day and apprentice courses since 1948 (Table XVIII) offers, perhaps, the main cause for the rise of concern at the Institute about its fundamental purpose. Comparative figures for the 1953-54 term show that during this term almost three times more apprentices received instruction at the Institute

²⁷ Ibid.

²⁸ Ibid., 1952, page 91.

than did its regular day students. By this time the only apprentices receiving instruction at the Canadian Vocational Training Center in Calgary were those in the plumbing, plastering, bricklaying, and painting and decorating trades.²⁹

Canada's continuing need for well-trained workers was acknowledged at the Institute by the observation that up to 1953 Canadian industry was not being provided with enough apprentices to merely replace the loss of skilled workers through retirement.³⁰

At the same time, however, the need for technicians in Canadian industry was likewise growing. Mr. E.W. Wood, formerly the Institute's Shop Director but since January 1, 1953 Mr. Fowler's successor as its Principal, reported that the ratio of technicians required by professionally-trained engineers rose since 1945 from 2.7:1 to 5.2:1 respectively.³¹ Yet the ratio in Canadian industry in 1960 was estimated to be only one and one-half technicians to each engineer.³² A result of the shortage of technicians was the costly

²⁹ Ibid., 1953, page 90.

³⁰ The Calgary Herald, December 18, 1953.

³¹ Ibid., November 21, 1953.

³² Paul Nowack, "The Growing Shortage of Technicians," Saturday Night., September 3, 1960, page 8.

practice of engineers engaging in semiprofessional work.³³

In Alberta the shortage of technicians had become keenly felt by 1954, when the value of manufactured products equaled the market value of farm produce.³⁴ Since the end of the War, the demand for graduates of the Institute had exceeded the supply,³⁵ with the result that many applicants for some courses were turned away.³⁶ In 1955 thirty-two requests for graduates from the radio and electronics department were unfilled, and similar shortages prevailed for graduates of drafting and aeronautics courses.³⁷

In his 1953 report to the Department of Education Mr. Wood stated that the inability of the Institute to meet the demands of industry for its graduates warranted investigation.³⁸

Anticipating increasing enrolments of apprentices, Mr. Wood, in the same report, advised the Department that, Decisions must soon be made to where extended apprentice training is to be given. Physical space

³³ The Calgary Herald, December 17, 1953.

³⁴ Alberta, Department of Education, Annual Report, op. cit., 1954, page 84.

³⁵ Ibid., 1951-58 passim.

³⁶ Ibid., 1945-1954 passim.

³⁷ Ibid., 1955, page 85.

³⁸ Ibid., 1953, page 85.

at the Institute is already at a very high premium. Any addition to the apprentice-training load will require the provision of additional shops, classrooms, laboratories, cafeteria and lunchroom space, administrative office space, and other facilities for students.³⁹

Mr. Wood noted the strain on facilities of the Institute's general office created by the apprentice-training program:

Because of the relatively short periods of training coupled with the variety in the lengths of the periods of training in the various trades, almost every week one or more groups of apprentices are coming to, or going from, the Institute. This fact adds greatly to the amount of office work in record keeping, in the preparation, printing and marking of examinations, pay and, their orientation. The existing general office is not large enough to accommodate the staff required for this work.⁴⁰

It appears that the training of apprentices at the Institute was doing what Mr. Fowler in 1947 pointed out it should not be allowed to do.

Finally the prestige of the Institute, battered by effects of the Depression, World War II, and the Alberta apprentice-training program, was receiving another setback. The Ryerson Institute of Technology, humbly begun in Toronto in 1948, was becoming the acknowledged leader in the field.

39

Ibid.

40

Ibid., 1945, page 91.

of technological education in Canada.⁴¹ By 1960 Ryerson's enrolment of technicians had become larger than that at Alberta's Institute of Technology.⁴² As early as 1950, however, it appeared that the Federal Department of Labour rated the latter to be the nation's leading school in the training of apprentices.⁴³

IV. CURRICULUM

Day Courses

Given representation on the Senate of the University of Alberta in 1925⁴⁴ and associated with the University through the Banff summer school program, the Institute of Technology in 1945 extended its relationship with the University by resuming the training of industrial arts teachers.

Discontinued in 1939 for reasons already stated, the training program was resumed in cooperation with the University's Faculty of Education, created out of the Provincial Normal schools, whose teacher-training function was assumed

⁴¹ Nowack, Saturday Night, op. cit., page 9.

⁴² Ibid.

⁴³ Alberta, Department of Education, Annual Report, op. cit., 1950, page 72.

⁴⁴ The Calgary Daily Herald, May 21, 1925.

in 1945 by the University of Alberta. Still housed in its temporary wartime quarters in King Edward School, the Branch was preparing to continue sharing its former residence with the Institute of Technology and Art.

By arrangement with the Faculty of Education, the Institute undertook to provide technical courses for industrial arts students in the first three years of their four-year program leading to the Bachelor of Education degree in Industrial Arts. The Institute's part in the training of these students was to qualify them as specialists in the teaching of industrial arts subjects in the secondary schools.

Although it was the first teacher training course of its type in Canada,⁴⁵ its establishment was for long a subject of Dr. Carpenter's urging.

During 1946 most of the outlines of the Institute's day courses were revised to bring them up-to-date with industrial developments and new trade practices.⁴⁶

In most of the Institute's courses the basis of instruction, however, remained the same.⁴⁷ As heretofore

⁴⁵
 op. cit., Alberta, Department of Education, Annual Report, 1945, page 54.

⁴⁶
Ibid., 1946, page 84.

⁴⁷
Ibid., 1948, page 76.

one-half of each day was devoted to shopwork involving projects of a commercial nature--the overhaul and repair of privately owned autos, tractors, combines, aeroplanes, radios, electrical equipment, etc. Construction and installation projects were being undertaken, as before, by the building construction and machine shop departments. For this service, customers were required to pay for parts and materials supplied as well as a nominal service charge to cover the cost of "overhead."⁴⁸ The other half day was given to classroom and laboratory work which included mathematics, physics, chemistry and drafting, as these subjects were applied in the various trades.⁴⁹

A notable addition to the curriculum was a third year of subjects to the existing course in aeronautics. The purpose of this addition was to prepare aeronautical students for the Royal Aeronautical Society's examination, the passing of which was required by any candidate desiring election to the Society as an Associate Fellow. Among candidates desiring this recognition, only honors graduates of engineering at a recognized university were exempted from

⁴⁸ Ibid., 1950, page 69.

⁴⁹ Ibid., 1948, page 76.

writing the examination.⁵⁰ The results of the aeronautical department's six students who wrote the examination in 1947 were considered to compare favourably with those at most other educational establishments preparing candidates for this examination.

The introduction of the three-year thirty-month course was a highly significant development, for it meant that the Institute had "very definitely" begun to offer engineering instruction at the professional level.⁵¹

A course in restaurant management was organized in 1949. Under the direction of Mrs. F. A. Denny, the class of thirteen students took over the operation of the Institute's cafeteria as a training project. The work carried out by the class included the purchasing and preparing of food, the serving of meals, the handling of finances, and cost-accounting.⁵²

A highlight in the drafting department during the 1949-50 term was the loaning of three second-year students in the survey drafting course to Inter-Provincial Pipe Lines Ltd. to draw plans for part of the Company's pipe line right-of-way between Edmonton and Winnipeg. The

⁵⁰ Ibid., 1947, page 89.

⁵¹ Ibid.

⁵² Ibid., 1950, page 71.

students also did much of the computing for this section of the line.⁵³

In keeping with Alberta's industrial development and, in particular, with the growing petrochemicals industry, the Institute offered in 1951 a one-year course in industrial laboratory technology. Thus the science department, for the first time in its short history, had entered the field of organic chemistry.⁵⁴

Indications at this time were that the offering of several more new courses required early consideration. The beginning of television broadcasting in Alberta was soon to create a need for trained television technicians. Oil exploration, geophysical surveying and aerial mapping were creating demands for practical courses in photogrammetry. Oil exploration, the growing industrialization in the Province, and perhaps the Railways' gradual conversion from steam to diesel locomotives were producing a demand at the Institute for day courses in diesel engine servicing and maintenance. The phenomenal increase in motor vehicle transportation was giving rise to requests from journeymen automobile mechanics for specialist courses in engine tune-up, wheel balancing, wheel alignment, frame straightening,

⁵³ Ibid., page 75.

⁵⁴ Ibid., 1953, page 80.

and in the servicing of all types of automatic transmissions and steering mechanisms.⁵⁵

In response to these demands, the Institute offered in the 1953-54 term a six-week day course in diesel engine servicing and maintenance, and a unit course in photogrammetry which was added to the first year of the course in surveying and drafting.⁵⁶

A successful addition to the day-course program in the 1955-56 term was a series of three special courses, each of ten weeks' duration, in dressmaking, tailoring, and slip-covers and drapes. Each course terminated with its own fashion show and exhibition of work done.

The Institute's inability to accommodate all applicants for courses resulted in a more rigid system of screening of applicants, most of whom were now high school graduates,⁵⁷ and a gradual upward revision of Institute courses.⁵⁸

The growing emphasis on the provision of technician-level courses probably accounted also for the reclassification and renaming of the courses (Table XIX, pp. 273-275).

⁵⁵ Ibid.

⁵⁶ Ibid., 1954, page 87.

⁵⁷ Ibid., 1954, page 85.

⁵⁸ Ibid.

TABLE XIX

ENROLMENT IN DAY CLASSES (EXCLUDING APPRENTICES) IN THE PERIOD 1945-1961
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	Length of Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955*	1956	1957	1958	1959	1960
		1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Air Engineers	2 yr.	32	46	37	31	32	27										
Art	2-4 yr.	72	83	75	69	64	58	51	52	53	49	70	90	110	145	169	172
Automobile Mechanics	16 mo.	28	51	48	42	45	40	41	38	33	40						
Automotive Electricity	5 mo.	6	12	4	4	8											
Building Construction and Drafting	2 yr.	36	51	36	26	20	20	27	34	27	23	9					
Commercial Wireless operating	1 yr.	29	19	12	18	17	7	19	15	19	21	21	16	22	41	41	41
Craftwork			3	9													
Dressmaking and Tailoring	2 yr.	23	31	45	28	39	32	25	25	31	27						
Electricity	2 yr.	72	102	71	51	44	35	32	43	38	41	39					
Farm Construction and Mechanics	5 mo.	23	41	29	28	15											
General Shop		1															
Industrial Arts for Teachers	3-4 yr.	20	39	45	32	33	18	25	22	19	41	30	28	23	28	37	54
Machine Shop	2 yr.	19	27	26	15	14	12	14	13	16	10	13	5				
Mechanical Drafting	2 yr.	16	28	20	10	15	18	11	14	22	21	10					
Radio Servicing	1 yr.	15	19	8													
Banff Art Summer School	6 wk.	143	224														
Survey and Drafting	2 yr.	11	16	13	22	33	33	28	48	19	41	50					
Tractors	10 wk.	22	23	11	9	7											
Tractor Mechanics	10 wk.	20	40														
Welding	3 wk.	48	61	85	101	205	141	220	201	177	162	153	131	162	201	207	232
Woodwork					4												
Aeronautical Engineering	3 yr.		6	8	14	9	9	13	6	9	12	16	18	69	67	53	55
Agricultural Mechanics	2 yr.			55	65	69											
Summer School for Teachers	6 wk.			80	85	73											

TABLE XIX (continued)

Course	Length of Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Radio and Refrigeration Servicing	2 yr.				18	34	31	31									
Restaurant Management Specials	1 yr.					13	17	10									
Agricultural Mechanics and Farm Construction	2 yr.					3	17	7									
Aircraft Maintenance	2 yr.					69	69	69	82	79	47	65	67	64	65	61	70
Food Service Training	1 yr.						22	22	35	49	51						
Laboratory Technology	1 yr.								17	11	16	15	21	9	13	32	42
Radio Electronics	1 yr.								14	20	20						
Refrigeration Technology	2 yr.								18	28	58	67	74	85	111	136	160
Automobile Service									4	8	16	10	6				
Engineering	2 yr.																
Diesel Engines	6 wk.													52			
Survey Drafting	2 yr.									14	12	46	42				
Aircraft Maintenance										18	18	15	18				
Engineering	2 yr.																
Construction Technology	2 yr.																
Carpenter's Special (N.W.T.)																	
Industrial Laboratory																	
Technology	2 yr.																
Clothing and Design	2 yr.																
Clothing and Design (Special Short Course)	6 mo.																
Drafting Technology	2 yr.																
Architectural Drafting Technology	2 yr.																

TABLE XIX (continued)

Course	Length of Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955*	1956	1957	1958	1959	1960
Automotive Service	2 yr.													41	47	59	55
Technology	2 yr.								53								
Survey Drafting Technology	2 yr.																
Electrical Technology	2 yr.																
Industrial	2 yr.													51	49	51	54
Land Surveying Technology	2 yr.													56	57	60	44
Aircraft Maintenance	2 yr.																
Technology	2 yr.													14	33	36	42
Mechanical Technology	2 yr.													11	19	25	29
Refrigeration and Appliance	2 yr.																
Servicing	1 yr.													7	16	16	16
Waitress Training	20 wk.													22	27		
Diesel Mechanics	2 yr.														52	51	65
Dressmaking	2 yr.															100	48
Petroleum Technology	2 yr.															22	46
Merchandising Administration	2 yr.																31
Totals		636	922	637	672	792	584	645	681	690	726	858	855	1006	1245	1368	1600

* Enrolments before the 1956-57 term were taken from Annual Announcements of the Institute of Technology.
Enrolments after this date were taken from Annual Reports of the Department of Education, Alberta.

In 1958 the term "engineering" as applied to Institute day courses and used vaguely and perhaps euphemistically since the Institute's establishment, was dropped. Its use was continued, however, in the naming of the three-year aeronautics course which, as already pointed out, was rated at the Institute to be an engineering course at the professional level.

During the 1958-59 term the Institute received the approval of the Provincial Government to establish, at the request of industry, three new courses: a two-year course in petroleum technology to commence in September, 1959; a two-year course in power plant technology to begin in September, 1960; and a two-year course in merchandising administration scheduled for offering at the same time.

Beginning in 1959, greater emphasis was given to the teaching of English, particularly in the areas of composition and technical report writing.⁵⁹ The increased attention given to English resulted from requests by advisory committees concerned with Institute courses that the importance of this subject be stressed and that additional time be given it.

⁵⁹ Ibid., 1960, page 123.

The English department, established in 1957⁶⁰ with a staff of two teachers, had grown by 1960 to comprise six members. By the latter date instruction in day classes was being provided by 16 departments employing 133 instructors.⁶¹

Evening Classes

Since the beginning of the postwar period evening classes have been continued without interruption. Attending evening classes in the first postwar term were civilian students including recently discharged war veterans and members of the Armed Forces.⁶² As in the case of day classes, lack of accommodation necessitated the turning away of large numbers of applicants for evening courses.

In response to requests from the public, two classes were organized in each of radio, drafting, welding and wood-working. Very popular also were dressmaking classes and a variety of courses in the art department. Discontinued in 1933, the evening courses in geology reappeared with an attendance of fifteen students (Table XX, pp. 278-281).

60

Provincial Institute of Technology and Art, Annual Announcement, *op. cit.*, 1957-58, page 10.

61

Ibid., pp. 8-11.

62

Alberta, Department of Education, Annual Report, *op. cit.*, 1945, page 74.

TABLE XX

ENROLMENTS IN EVENING CLASSES IN THE PERIOD 1945-1961
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1955*	1956	1957	1958	1959	1960
Art	78	64	139	197	147	182	194	40	67	76	136	157	153	232	256	262	
Automobile Mechanics	15	33	26	52	32	56	50										
Building Construction and Drafting	11	15	17	26	20	19	21										
Carpentry	19	29		37	27	41	35	51	47	38	65	52	26	58	41	19	
Craftwork	26	28	43		7	8	19	14	22	18							
Dressmaking	51	60	76	93	116	105	134	99	98	113	251	276	312	368	425	452	
Electricity	36	19	20	13	30	23	14	8									
Geology	15			36	33	43	20	19									
Machine Shop	15	35	49	27	14	14	27	26	27	24	26	25	16	25	30	26	
Mechanical Drafting	19	15	17	18			18	15				17	31	13	27		
Radio and Refrigeration	29		26	27	21												
Survey Drafting					14	19	21	18	17	50							
Welding	30	41	50	57	41	39	60	83	79	77	75	80	99	115	139	177	
Woodwork	15	23	12	19	42	44	44	40	70	58	52	58	45	34	36	40	
Diesel		14	11	21	41	29	37	36	40	40	31	36					
Bride's Course					11												
Ceramics					30	12	23	16	15	24	24	24	36	48	40	41	
Driver Mechanics					29			54									
Drafting and Sheet Metal					27	53	46	66									
Radio Code					15	14	18	16	18		16	16	20	22	18	19	
Weaving					7	6	7	6	7	7	7	7	8	8	10	10	
Estimating for Builders						22	14	19	24	27	22	24	47	34	40	20	
Oil Chemistry						11	13	14	15			16	12	59	50	36	
Petroleum Geology						41	42	43	55	64	75	76	77				
Radio Servicing						14	16	24									

TABLE XX (continued)

Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1955*	1956	1957	1958	1959	1960
Show Cards	19							19									
Tailoring	12						19	15	17	32		36	31	15			12
Blueprint Reading							25	26	25	27		49	52	49	35	50	50
Materials Testing and Heat Treating							26	12									
Aircraft Mechanics								69									
Architectural Drafting								11	26	22		24	21	21	24	24	
Art (Saturday Morning)								118	199	202		216	222	235	237	268	256
Electric Theory (Advanced)								13	19	14		30	15	16			
Auto Front End Alignment								15	10				11		9		7
Metal Layout								15									
Motor Tune-up								13	16	15		17	16	13	13		16
Pattern Drafting								12	9								34
F.M. Radio								22									
Sheet Metal Drafting								4	29			19	19				
Car Owner's Course									60	61		61	60	51	60	48	44
Cooking									14	26		36	49	34	46	32	30
Electricity (Elementary)									41	29		32					
General Drafting									64	40		50	87	61	59	37	82
Geology (Elementary)									14								
Photogrammetry									14	21		18	19	15			
Radio (Basic)									23	26		50	52	49	51	44	
Television Receivers									63	43			26	27	25	19	23
Refrigeration										25		25	13	16	20	22	13
Concrete Technology										48		12	24				
Lineman's Theory										26		18					
T.V. for Salesmen										18							
Automatic Transmissions												17	18	18	18		

TABLE XX (continued)

Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1955*	1956	1957	1958	1959	1960
Geology (General)																		
Elementary Calculus														39	35	24	18	
Personal Grooming														17	20	15	16	11
Speech Training														44	53	17		
Steam Engineering (Elementary)														48				
Survey Drafting (Elementary)														17	11			
Survey Drafting (Advanced)														62	58	58		
Aircraft Riveting														22	18	19		
Effective Speaking															11			
Electrical Theory and Code														50	45	48	50	50
Electric Theory (Elementary)														38	37	45	54	70
Fashion Accessories														42	49			
Hand Crafts														14	15	15	16	12
Metallurgy														18	18	18	17	16
Professional English Tutoring														17				
Architectural Design, Fundamental														35				
Aircraft Maintenance Theory															23	11		
History of Architecture															18			
Diesel Mechanics															20			
Mathematics for Tradesmen															38	19	19	19
Steam Engineering															24	21	16	26
Structural Steel Drafting															18	17	20	18
Architectural Design II															16	16	15	10
Electrical Theory																15		
Electronics, Industrial																114	71	61
Laboratory Techniques																40	20	20
Millinery																19	25	32
Structural Theory and Design																15	46	25
																20	37	

TABLE XX (continued)

Course	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955*	1956	1957	1958	1959	1960	1961
Survey Drafting														81	81	53	
Drapes and Slip Covers															30	50	
Electric and Radio Theory															31		
Photography															35	115	
Technical Report Writing															17	17	
Auto Theory																25	
Carpentry for Home Owners																20	
Diesel (Basic)																19	
Diesel (Advanced)																20	
Drafting Technical																11	
Electronics (Basic)																82	
Industrial Chemistry																20	
Lathers' Theory																13	
Radio Receiver Theory																23	
Transistor Theory																34	
Totals	359	376	486	643	704	826	943	1071	1244	1301	1771	2019	1956	2171	2300	2522	

* Enrolments before the 1956-1957 term were taken from Annual Announcements of the Institute of Technology.
Enrolments after this date were taken from Annual Reports of the Department of Education, Alberta.

A new feature was added to the evening class program in the fall of 1948 with the organization of special classes for technical personnel of various units of the reserve Army. The classes were requested by officials of the Department of National Defence. The arranging of similar courses for reserve Naval personnel of H.M.C.S. Tecumseh in Calgary were also under discussion.

The 1950-51 evening-class enrolment was the highest since 1929. Because accommodation for evening classes had again become inadequate, more applicants for some courses were turned away than accepted.⁶³

Among new courses in the 1953-54 evening program was a course in aerodynamics, offered at the request of officials of the Canadian Pacific Air Lines Ltd. and of the Fleet Air Arm of the Royal Canadian Navy.

During the same term a very encouraging development was the payment by certain firms of tuition for evening classes taken by their employees, providing that the courses were successfully completed.⁶⁴ This arrangement between the companies concerned and their employees was viewed at the Institute as an indication of growing interest by

⁶³ Ibid., 1951, page 91.

⁶⁴ Ibid., 1953, page 85.

industry in the evening course program and in the upgrading of employees.

Most evening classes offered between 1945 and 1954 were of 72 hours duration. Instruction was provided in a two-hour class twice weekly for a period of 18 weeks. Evident by the latter date, however, was a tendency on the part of evening-class students to engage in numerous evening activities, a condition which reduced the students' available time for study.⁶⁵ Noted also was the increasing amount of time required by students to travel to and from the Institute, a necessity attributable to the city's continuous growth. In the 1944-45 term some non-lecture courses were given, as an experiment, in a three-hour class weekly for twenty-four weeks.

The new arrangement proved very popular with students and staff. In the following term a larger number of courses were similarly timetabled, and since more accommodation was thus made available, the registration for evening classes in this term exceeded that of the previous year by 33.5 percent.⁶⁶ The record-breaking enrolment required a staff of seventy instructors of whom forty were day-class instructional personnel.

⁶⁵ Ibid., 1954, page 89.

⁶⁶ Ibid., 1954, page 89.

The primary purpose of the evening class program has continually been to assist workers in industry by supplementing their practical work with technical and theoretical instruction. The program has sought also to provide sufficient basic instruction to those desiring to take up a new vocation. A more recent objective has been to provide young and old with cultural experience leading to the enrichment of their leisure time activities.⁶⁷

The success and popularity of the evening class program is shown not only by continually increasing enrolments but by the large area outside metropolitan Calgary served by the program. The many locations from which students in recent years have been attracted by the evening classes include Okotoks, Claresholm, Eckville, High River, Irricana, Beiseker, Drumheller, Strathmore, Didsbury, Turner Valley, and even Medicine Hat, located almost two hundred miles east of Calgary.⁶⁸

Correspondence Courses

Enrolments in correspondence courses increased by 30 percent in the first postwar school term and the number of

⁶⁷

Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1960-61, page 10.

⁶⁸

Alberta, Department of Education, Annual Report, op. cit., 1958, pp. 95-96; 1959, page 106.

papers corrected increased by 45 percent.⁶⁹ Three hundred and fifty complete courses were sold during the term for instructional use outside Alberta. The mining courses were used as textbooks in mining classes in British Columbia and Nova Scotia; the steam courses were used in evening classes in Saskatchewan and Manitoba. Newly revised, the third-class steam course was sold as a textbook to a considerable number of former Navy engine-room personnel who were seeking a third-class steam engineering certificate. In Alberta the men were advised by the Provincial Steam Boiler Inspection Department to study the textbook before attempting the examination for the certificate.⁷⁰

Examinations in correspondence courses were upgraded in the early postwar period chiefly because of the higher educational attainments of the applicants for the courses. By 1946 the student with only Grade V standing or less had almost disappeared from the department's enrolments, and the majority of correspondence students now had one or more years of senior high school education.⁷¹

Enrolments in the correspondence department's course

⁶⁹ Ibid., page 74.

⁷⁰ Ibid.

⁷¹ Ibid., 1947, page 95.

in preliminary mathematics first appeared separately under the course's new name, "Practical Mathematics" in 1947 (Table XXI, page 287). Preparatory for courses in steam (power plant) engineering, this mathematics course was evidently made a requirement for the majority of students enrolled in the steam courses after 1956.

Declining in enrolments since 1946, instruction in mining courses was discontinued at the Institute in 1954. Papers were accepted for correcting, however, until 1956. The continuous reductions in enrolment were attributed mainly to the difficulties facing the mining industry caused by increasing competition from alternative sources of fuel.⁷² A further reduction in the enrolments resulted from the establishment of mining classes in several parts of the province and the consequent loss of a number of prospective students. The Institute's correspondence department supplied these classes with instruction materials at low cost.

In the meantime increasing enrolments in the steam courses necessitated the "farming out" of students' answer papers for marking and delayed the work of revising the first-class steam course. The growing demand for power

⁷² Ibid., 1950, page 79.

plant engineers corresponded with increasing demands for electrical power, 75 percent of which in Alberta was by 1959 thermally generated.⁷³

TABLE XXI

ENROLMENTS IN CORRESPONDENCE COURSES 1945-1961
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Term	Steam	Mining	Preliminary Math.	Totals
1945-46	260	135		395
1946-47	136	110		246
1947-48	189	76	28	293
1948-49	190	70	20	280
1949-50	180	50	37	267
1950-51	310	70	45	425
1951-52	325	75	60	460
1952-53	350	50	45	445
1953-54	450	35	60	545
1954-55	400		70	470
1955-56	661		85	746
1956-57	577		427	1004
1957-58	490		394	884
1958-59	837		543	1380
1959-60	742		543	1285
1960-61	858		544	1402

In addition to carrying out its own work, the correspondence department was required to print, for all departments, all mimeographed material including examination papers, instruction sheets, news bulletins, and advertising

⁷³ The Calgary Herald, January 29, 1959.

sheets for high schools. Because of the growing burden of work resulting from continuing increases in enrolment, the correspondence department was relieved of its extra duties in 1959 when they were taken over by the duplicating service department under the supervision of the director of instruction.⁷⁴

The Art Department

Members of the art department's instructional staff continued to win recognition for their work as artists. The Royal Canadian Academy accepted paintings from Messrs. W.J. Phillips R.C.A., H.G. Glyde, A.R.C.A., L.E. Pearson and Luke Lindoe for its 1945 exhibition in Toronto.

An important extension of the art department's service was made in 1947 with the establishment of art classes for children. The classes were scheduled for Saturday mornings between 10:00 a.m. and 12:00 noon. Limited to one hundred students in the 8-16 age group, the course was to run for twenty weeks.

The object of the course was to develop the children's natural talents and to allow them to paint unrestricted rather than with restraint.⁷⁵ No formal

⁷⁴ Ibid., 1960, page 126.

⁷⁵ The Calgary Herald, October 24, 1947.

instruction in art was to be given.

Difficulty was experienced in obtaining applicants for the course in its first term, but with the reduction of the fee required from \$10 to \$3 in the next term, the course was given a "fresh lease of life."⁷⁶ As the course increased in popularity the restriction on enrolment was removed. Table XX shows a peak enrolment of 268 students in the 1959-60 term.

Evening art classes, offered without interruption since their addition to the curriculum before the Depression, likewise enjoyed increasing popularity, reaching a record enrolment of 262 students in the fall of 1960.

The steadily increasing enrolment in the art department was attributed in part to the campaign of publicity planned and conducted under the guidance of Mr. Illingworth H. Kerr, appointed head of the department in 1947.⁷⁷

Seventy attractive posters designed by art students were placed in Calgary street cars and buses in 1948 in the month of July, when tourist traffic was at its height. A similar number of posters were distributed to all of

⁷⁶ Alberta, Department of Education, Annual Report, op. cit., 1947, page 91.

⁷⁷ Ibid., 1949, page 61.

Alberta's public libraries through the cooperation of Mr. Richard McDonald, Coordinator of Cultural Activities, Department of Economic Affairs.

During the 1948-49 term exhibitions of art and craftwork completed by students of the art department were arranged as follows:⁷⁸

- (a) Annual Spring Exhibition at the Institute.
- (b) Travelling Show on the Western Art Circuit-exhibited in Winnipeg, Regina, Saskatoon, Edmonton, Calgary and Victoria.
- (c) Display at Calgary Exhibition and Stampede--Seen by an estimated 40,000 visitors.
- (d) Small show in Saskatchewan towns under the supervision of one of the Art students.
- (e) Shows in Vernon, Kelowna and the Okanagan, under the sponsorship of Mr. Lindoe.
- (f) Pacific National Exposition, Vancouver, B.C.
- (g) Small display of Commercial Art and Craftwork in Legislative Building, Edmonton.

In 1948 a fifth diploma course was added to the existing four in the art department's day-class program. The addition was a three-year course in pottery, ceramics, and industrial design.

In addition to the instruction provided in the summer art classes in Banff by members of the Institute's art department in 1945, Mr. Glyde, head of the department,

⁷⁸ Ibid., pp.61-62.

instructed at art summer schools organized in Lethbridge and Edmonton.

In 1947 it was "deemed wise" to end the cooperative effort between the Institute and the University of Alberta in the operation of the Banff School of Fine Arts.⁷⁹ With the establishment of the Banff Foundation and the proposed expansion of the School's work, control of the School was assumed entirely by the University. Members of the Institute's art department remain entitled to act as instructors at the summer sessions of the Banff School.

When the Institute in December, 1960 was renamed the Southern Alberta Institute of Technology, the art department, on Mr. Kerr's request, was given individual identity as the Alberta College of Art. The College remained, however, a division of the Institute. Former reference to the College as the art department of the Institute, in Mr. Kerr's opinion, deprived the art school of due recognition.⁸⁰ The level of instruction in the College, though not recognized by the University of Alberta to be of university grade, is comparable to that offered at the Vancouver School of Art or the Ontario College of Art in

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Ibid., 1947, page 96.

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Statement by Mr. Illingworth W. Kerr, Head, Alberta College of Art, Calgary, personal interview.

Toronto.⁸¹

Summer School for Teachers of Industrial Arts

Discontinued in 1939, summer school instruction for teachers of industrial arts in secondary schools was resumed in 1947 in cooperation with the University of Alberta. Theoretical and shop courses were offered to a total enrolment of 80 teachers.

An outstanding characteristic of the 1948 summer session was the "extreme industry" of the students, many of whom worked in the shops during the noon hour and after 5:00 p.m., so as to obtain the "greatest possible amount" of training and experience.⁸²

A summer session was held again in 1949 with a slightly reduced enrolment (Table XIX). At the close of the session, however, summer school instruction at the Institute was once again discontinued, not to be resumed until 1960.⁸³

Perhaps the chief reason for the closing of the Institute's summer school in the interim was the necessity for Industrial Arts teachers to take university courses

⁸¹ Ibid.

⁸² Ibid., 1948, page 82.

⁸³ Letter from Mr. D.C. Fleming, Director of Instruction, Southern Alberta Institute of Technology, Calgary, Alberta, July 31, 1962.

during the summer in Edmonton, as a summer school was not established at the Calgary Branch of the University until 1961. In Edmonton the function of providing shop courses for industrial arts teachers was undertaken at the Victoria Composite High School.

With the establishment of a summer school at the University of Alberta, Calgary, the Institute of Technology again continued its summer classes for industrial arts and other teachers of Alberta's secondary school system.

V. ADMISSION REQUIREMENTS

Institute Day Courses

Little had been done prior to 1943 in the fixing of educational prerequisites for Institute courses. It has already been seen, however, that selection of applicants for certain courses was made on the basis of their likelihood to succeed in them.

As an academic prerequisite for the radio servicing course first offered in 1943, the Institute recommended that an applicant for the course have Grade X standing or higher.⁸⁴ In the following year the minimum educational prerequisite for the commercial wireless operating course

⁸⁴ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1943-44, page 17.

started in that year was set at Grade X, although preference was given to applicants holding a high school diploma. In 1945 the prerequisite for admission into the air engineering course was Grade X or its equivalent.⁸⁵

Students applying for the combined radio and refrigeration course, which was added to the day-class program in 1948, were required to have completed Algebra I and Physics I or their equivalents. Other requisites announced in that year were the completion of Algebra I or equivalent for the courses of mechanical drafting, and surveying and drafting.

Increased attention was given the matter of educational prerequisites in 1950, when the training of apprentices at the Institute had begun to make large demands on its facilities. At this time the Institute announced that because of the lack of space it would possibly be necessary to restrict enrolments in some of the Institute courses, and that in this event the Institute reserved the right to select those students whom the Institute considered most likely to succeed in them.⁸⁶ Applicants were now required to present transcripts of their Grade IX

⁸⁵ *Ibid.*, 1945-46, page 23.

⁸⁶ *Ibid.*, 1950-51, page 16.

and high school standings when registering at the Institute.

By 1953 educational prerequisites were raised for most of the Institute's courses.⁸⁷ It was reported, however, that in spite of this measure, students entering the Institute displayed "a general lack of facility, accuracy and thoroughness" in mathematics, physics and English.⁸⁸

It was concluded at the Institute that academic attainment alone was not a criterion for success in technological studies, and that another basis for selection would perhaps have to be tried.⁸⁹

Coupled with the raising of prerequisites due to lack of accommodation was the demand by industry for better trained technicians, capable of dealing with advancing technologies. This demand centered largely in the area of mathematics.⁹⁰

Following registration in the fall of 1955, all first-year students were given a mathematics survey test. Students who failed the examination were required to take a remedial mathematics course after regular hours. The

⁸⁷ Alberta, Department of Education Annual Report, op. cit., 1953, page 83.

⁸⁸ Ibid.

⁸⁹ Ibid., 1954, page 84.

⁹⁰ Ibid., 1956, page 90.

results of the final examinations compared with the marks obtained in the survey test indicated that the course was worthwhile.⁹¹

By the autumn of 1956 educational prerequisites for day courses excluding courses for apprentices and industrial arts students, were as outlined in Table XXII, page 297.⁹² The minimum age for admission remained unchanged at 16 years.

Since 1956 further revisions were made in the classification of some courses and in their educational prerequisites. Classifications of courses and educational requirements for admission to them at present are shown in Table XXIII, pp. 298-299.

Following commencement of courses in the fall, first-year students enrolled in almost all technician courses have been required since 1958 to write examinations in science as well as in mathematics.⁹³ Prospective students seeking admission to these courses have been urged since the introduction of the tests to review high school studies relating to them before registering at the Institute.

⁹¹ Ibid., page 93.

⁹² Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1956-57, pp. 12-13.

⁹³ Ibid., 1958-1962 *passim*.

TABLE XXII

EDUCATIONAL PREREQUISITES FOR INSTITUTE COURSES 1956
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Courses	Prerequisites
<u>Junior Engineering Courses</u>	Preference given to applicants holding 100 high school credits, including Mathematics 30 or 32, Science 20, and English 20, with not less than a "B" standing in each subject.
Aeronautical Engineering	
Surveying and Drafting Technology	
Architectural Drafting Technology	
<u>Technician Courses (group 1)</u>	
Aircraft Maintenance Engineering	
Construction Technology	Same as above.
Industrial Laboratory Technology	
Radio and Electronics Technology	
<u>Technician Courses (group 2)</u>	Preference given to applicants holding 70 high school credits, including Mathematics 20 or 22, Science 20 and English 20, and who, in the Institute's opinion, were most likely to succeed in the work of the course.
Automotive Service Engineering	
Commercial Wireless Operating	
Drafting Technology	
Industrial Electricity	
Machine Shop Technology	
<u>Cultural Courses</u>	
Applied Art and General Crafts	
Commercial Art, Advanced	None Specified.
General Art	
Fine Art, Advanced	
Pottery, Ceramics, and Industrial Design	
<u>Other Courses</u> (excluding apprentice and Industrial Arts courses).	None specified, with the exception of Refrigeration and Appliance Servicing, for which preference was given to applicants having credit in Mathematics 10 or 12 and Science 20.

TABLE XIII

EDUCATIONAL PREREQUISITES FOR INSTITUTE COURSES 1962
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Courses	Prerequisites
<u>Engineering-Technician Courses</u>	
Aeronautical Engineering (3) *	Preference given to applicants having a minimum of 100 Alberta high school credits, or equivalent, with a minimum of a "B" standing (50%-60%) in Mathematics 30 or 32, Science 20 and English 20.
Architectural Technology (2)	
Electronic Technology (2)	
Industrial Laboratory Technology (2)	
Land Surveying Technology (2)	
Petroleum Technology (2)	
Power Plant Engineering (2)	
<u>Technician Courses (group 1)</u>	
Aircraft Maintenance Technology (2)	Preference given to applicants having a minimum of 67 Alberta high school credits, or equivalent, with a minimum of a "B" standing in Mathematics 20 or 22, Science 20 and English 20.
Drafting Technology (2)	
Industrial Electrical Technology (2)	
Mechanical Technology (2)	
Refrigeration and Air Conditioning Technology (2)	
<u>Technician Courses (group 2)</u>	
Automotive Service Technology (2)	As for technician courses in group 1 less the requirement of a minimum standing in each subject.
Commercial Radio Operating (1)	
Construction Technology (2)	
Merchandising Administration (2)	As in technician courses group 1.
<u>Cultural Courses</u>	
General Art (2)	Preference given to applicants with a minimum of Alberta Grade 11 standing, or equivalent.
Fine Art Advanced (4)	
Commercial Art, Advanced (4)	
Applied Art and General Crafts (3)	
Pottery and Ceramics (3)	

TABLE XXIII (continued)

Courses	Prerequisites
<u>Trade Training Courses</u>	
Commercial Cooking (2)*	Preference given to applicants having a minimum of 35 Alberta high school credits, or equivalent.
Agricultural Mechanics (2) Diesel Mechanics (5 mo.)	Preference given to applicants having at least Mathematics 10 or 12 or Science 10 or the Alberta high school program, or equivalent.
Dining Room Service (10 wk.) Welding (3 wk.)	None specified.

* Bracketed figures show length of course in years unless otherwise stated.

It has been seen that the minimum cost for an out-of-town student's attendance at the Institute for a full term in the period 1920-29 was approximately \$300. Increases in fees occurred from time to time since 1929, and, by 1962 the fee for a regular term of nine months was \$67. At the latter date, board and room was available at Calgary boarding houses for approximately \$60 per month.⁹⁴ The minimum annual cost of attendance for an out-of-town student had thus risen to about \$600 or twice the cost in 1920. Fees in recent years were estimated to cover less than one-tenth

⁹⁴ Ibid., 1961-62, page 34.

the cost of instruction.⁹⁵

Industrial Arts Courses

Requirements for admission into the programs for industrial arts students were laid down by the University of Alberta. During the latter part of the postwar period the prerequisites have been similar to requirements for admission into any other course leading to the Bachelor of Education degree, that is, possession of a high school diploma with at least a "B" standing in each of six Grade XII Departmental examination subjects.⁹⁶ In the same period the required overall average mark in these subjects has been 60 percent.

Apprenticeship Courses

The minimum educational requirements for admission into apprenticeship training vary in the different trades. The completion of Grade VIII or equivalent has been the most common requirement. The range of educational prerequisites varies from none in the motor mechanics and sheet metal trades to Grade X for electrician apprentices.⁹⁷ As mastery of the technology required in the trades is considered

⁹⁵ The Albertan, December 31, 1959.

⁹⁶ Calendar, University of Alberta, Edmonton, 1945-1961, passim.

⁹⁷ A Modern Concept of Apprenticeship, op. cit., page 14.

difficult for anyone without some high school education, however, preference is likely to be given to applicants with two or more years of high school.⁹⁸

VI. THE INSTITUTE AND ALBERTA'S SENIOR HIGH SCHOOLS

The establishment of educational prerequisites for admission into Institute courses resulted in a closer relationship between the Institute and the curriculum of the Province's secondary schools. An examination of these prerequisites reveals that the Institute has become an educational institution at the post-secondary school level.

Evident in this relationship is a marked modification in the Institute's original purpose, which was, as stated in 1923 by its Vice-Principal, Mr. J.H. Ross, to prepare a student for a particular trade with the possibility of his becoming a foreman or superintendent, in view of his training at the Institute. None of the courses he pointed out, followed high school work or led to university. He stated that the Dominion's grant amounting to one-half of the cost of the Institute's maintenance and capital expenditures was made on the condition that there were to be no educational prerequisites for entrance. Until the beginning of the postwar period, the Institute operated almost entirely on

⁹⁸ Ibid.

the basis explained by Mr. Ross.

In the last decade, however, the Institute was forced in ways already seen to end its existence as a school outside the educational stream, and to become integrated within it.

An important development in the process of integration with the secondary school curriculum occurred in 1950, when students who had successfully completed a unit shop subject in Grades X, XI, and XII in Alberta with a minimum of an "A" standing were entitled to receive credit at the Institute for the first year of the comparable two-year course.⁹⁹ The unit shop courses concerned were later identified as automotives, electricity, metal, and woodwork.

At the same time a similar agreement was reached between the Apprenticeship Board and the Department of Education. The granting of a year's credit on an apprenticeship in recognition of high school shop courses has been conditional, however, on an applicant's achievement on examinations set by the Apprenticeship Board.¹⁰⁰

Two years previously, Mr. Ross Ford, Director of the

⁹⁹ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1950-51, page 13.

¹⁰⁰ Statement by Mr. Bruce Henry, Supervisor, Provincial Apprenticeship Board, Lethbridge, Alberta, personal interview.

Technical Education Branch of the Federal Department of Labour, recommended that the two steps described above be taken.¹⁰¹ Mr. Fowler, then Principal of the Institute, interpreted the recommendation to mean that Mr. Ford desired high school students to complete Grade XII before entering the Institute.¹⁰²

Established on the authority of the Department of Education, the relationship between Institute courses and high school technical electives has not proved satisfactory.¹⁰³ The Institute has not recognized a high school unit shop program to be the equivalent of the first year course in a similar program at the Institute.¹⁰⁴

The Cameron Royal Commission reported that industrial arts courses in the high schools failed in their vocational training function. The report of the Commission states that,

The Commission's impression is that some of the electives provided go beyond the requirements of general

¹⁰¹ The Calgary Herald, March 12, 1949.

¹⁰² Ibid.

¹⁰³ Ibid., June 1, 1961.

¹⁰⁴ Statement by Mr. D.C. Fleming, Director of Instruction, Southern Alberta Institute of Technology, personal interview.

education and approach a degree of vocational training which is incomplete and ineffective.¹⁰⁵

Perhaps the reason for the lack of achievement in high school courses was, as stated by Mr. Ward Steckle, Principal of Calgary's Western Canada Composite High School, that students were being "sluffed" by parents and teachers into taking them.¹⁰⁶ Also deeming the technical education program in Alberta high schools a failure, Mr. Steckle said that although shop courses in the high schools were intended to prepare students for further study in a technical college, they had failed to do so because in most cases students with "neither the interest nor the ability" were taking them.¹⁰⁷

An indication of the extent of the failure appears in Departmental statistics showing that of 633 Alberta students enrolled in Electricity 10 in the 1956-57 term, 168 continued in Electricity 20, and only 28 in Electricity 30.¹⁰⁸

In explanation of the reduced enrolments, a report

¹⁰⁵ Report of the Royal Commission on Education in Alberta, Edmonton, 1959, page 136.

¹⁰⁶ The Calgary Herald, December 18, 1958.

¹⁰⁷ Ibid.

¹⁰⁸ The Calgary Herald, June 1, 1961.

by the Calgary Public School Board states that since the relationship between unit shop courses to similar courses at the Institute has not been satisfactorily established, students enrolling in high school technical electives have little incentive to complete a full program of these courses or give them the attention they deserve.¹⁰⁹

A need for vocational education at the secondary school level, however, exists. This need has been associated with the large enrolments in the high school matriculation program. Of 1606 Grade IX graduates in 1955, only 343 went on to university.¹¹⁰ Yet, in 1961 almost 70 percent of Calgary's high school population were enrolled in this program.

The need for accreditable vocational education at the secondary school level is made evident also by a recent study conducted by the Department of Education, which found that 43 percent of 1045 Grade XI and XII industrial arts students surveyed took shop courses for vocational purposes.¹¹¹

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ "Final Report of the Study Concerning the Vocational Effectiveness of the Auto 20, Auto 30, Metal 20 and Metal 30 Courses offered in 1954-55 and 1955-56 in Seven Alberta Composite High Schools," Department of Education, Edmonton, Alberta, April, 1958, page 9.

Acknowledging the need for vocational education, the Cameron Commission recommended that technical electives of near-vocational nature and intent be reviewed, if necessary, with the view to making them acceptable to business and the trades, and that these electives be offered in urban school systems and in community colleges in rural areas.

It would appear, however, that local school boards are reluctant to accept full responsibility for providing vocational education in the high schools. In reply to the Commission's recommendations above, Mr. Robert Warren, Superintendent for the Calgary Public School Board, stated that the recommendations "cannot be properly implemented except on a provincial level."¹¹² Mr. Warren has not considered the provision of vocational training as a proper function of the high schools. Since both the high schools and the Institute offer it, he named this area of education a "no-man's land."¹¹³

In contrast with the Commission's recommendations, Mr. Warren insisted that "this great area of vocational and trade training" be carried out by an agency supported both by the Province and the Dominion.¹¹⁴

¹¹² The Albertan, December 31, 1959.

¹¹³ Ibid.

¹¹⁴ Ibid.

Whether the largely Federal "vocational" high schools presently being established in several Alberta centers will occupy Mr. Warren's "no-man's land," or whether they will establish a satisfactory interrelationship with Alberta's institutes of technology and the Apprenticeship Board remains to be seen.

VII. ADVISORY COMMITTEES

The beginning made in the establishment of advisory committees shortly before the Economic Depression was apparently not resumed until 1955 when, on the authority of the Minister of Education, an advisory committee for the food service training course was established. During the 1955-56 term, a committee of ten members representative of the various industries connected with the course, was appointed. The committee met twice during the term and their contribution to the course was considered helpful and

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very worthwhile. The members of the committee were as follows:

Chairman: Mr. Sven Erickson of the Narguis Pastry, Candy and Coffee Shop, Lethbridge, representing the Restaurant Operators; Mr. W. A. Macdonald of Ye Olde English Fish & Chip Shop, Edmonton; Mr. Kees Torzen of Lindy's Restaurant, Edmonton; Mr. Fred Watson of the Starlight Room, Royal Hotel, Calgary; Mr. Horace King

of the Tea Kettle Inn, Calgary; representing the Restaurant Operators. Miss Helen Jacobson, Chief Dietitian of the General Hospital, Calgary, representing the Home Economists. Mr. Grant MacEwan, Member Legislative Assembly, representing the general public. Mr. H.C. Craig, Java Shop, Fort MacLeod, Regional Coordinator of the Alberta Branch of the Canadian Restaurant Association. Mr. H.A. Webster, Southern Supervisor of the Department of Economic Affairs, representing the Tourist Agencies. Mr. W. Pillidge, Chief Sanitary Inspector of the Health Department of the City of Calgary, representing the Health and Sanitation Services. Mr. George Ellis of the Electrical Wholesalers, Calgary, representing the Equipment Suppliers.¹¹⁶

In the following year advisory committees were formed for industrial laboratory technology, construction technology, architectural drafting technology, and drafting technology.¹¹⁷ By 1961 twelve committees were reported to be functioning.

The organization and operation of the advisory committees has been carried out at no cost to the Provincial Government as members of the committees serve voluntarily and at their own expense.

The committees act as a liaison between the Institute and industry. They assist in the organization of new courses, and continue to advise the Institute in matters concerning curriculum. The committees endeavor to interest

¹¹⁶ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1956-57, pp. 18-19.

¹¹⁷ Alberta, Department of Education, Annual Report, op. cit., 1956, page 90.

students in the industries with which their courses are allied,¹¹⁸ and to keep them informed on employment opportunities in these industries.¹¹⁹

VIII. IN-SERVICE TRAINING

The substantial program of in-service training established shortly before the Economic Depression was apparently not continued significantly until 1950.¹²⁰ During the 1950-51 term two courses in teacher training for the Institute's instructional staff were organized. One of the courses, dealing with shop techniques and hand skills, was conducted on Saturday mornings during February and March by Messrs. E.W. Wood, O. Kingsep, and M.J. Tomlinson. Following the close of the Institute term in May, a second course on the preparation and use of instruction sheets was given by Mr. Wood. Designed to upgrade junior members of the staff, the courses resulted in improved "esprit de corps" as well as in better teaching techniques in the shops and classrooms.¹²¹

¹¹⁸ Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1961-62, page 23.

¹¹⁹ The Albertan, June 14, 1953.

¹²⁰ Ibid., 1929-1950 passim.

¹²¹ Ibid., 1951, page 91.

The in-service training program was extended in 1955 and made compulsory for all new members of the instructional staff, with or without teacher certification. The extended in-service program consisted of approximately 30 hours of instruction in each of a new staff member's first two years at the Institute.

The new course was evidently considered to be inadequate, however, in view of an announcement by Mr. Wood in December, 1959 that the in-service training program was to be expanded.¹²² The reason given for the planned expansion of the program was that the Institute needed instructors who were not only well trained in a specified technology, but also trained in the "methods and techniques" of teaching.¹²³

Accordingly, a third-year unit also of approximately 30 hours was added to the program in 1961. This addition has not proved entirely satisfactory.¹²⁴ The in-service class, consisting in recent years of approximately 25 members, have included new instructors as well as those taking the second and third units of the course, a situation

¹²² The Albertan, December 31, 1959.

¹²³ Ibid.

¹²⁴ Statement by Mr. S.E. Overby, Head, Mathematics-Physics Department, Southern Alberta Institute of Technology, Calgary, personal interview.

which has entailed a considerable amount of repetitive instruction. As a result it has been decided to drop the third-year section of the program, although ¹²⁵some have been given to dividing the class into "homogeneous" groups and reinstituting the third-year component of the course.

The Institute's present in-service teacher training program consists of lectures and demonstration lessons by experienced staff members, most of whom have or are working on teacher certification. Lectures in the 1961 in-service course appear under headings which include "Maintaining Discipline," "The Principles of Learning," "Lesson Planning," and "Teaching Methods."¹²⁶

Completion of neither the two-term course, though compulsory, nor of the three-term is creditable towards teacher certification. Completion of the latter program, however, qualifies an instructor for a salary increment and for credit equivalence to the completion of a summer school course in teacher training, as offered for vocational teachers by Departments of Education in Toronto, Ottawa, Winnipeg¹²⁷ and Vancouver. The courses in these centers are likewise not accreditable towards teacher certification.

125

Ibid.

126

Syllabus for the 1961 Teacher Training Program, Southern Alberta Institute of Technology, Calgary, pp.3-4.

127

D.C. Fleming, *op. cit.*, personal interview.

IX. STUDENTS

General

Estimated to be 8.8 grades of public school education in 1929 and ten grades in 1938, the average educational attainment of students on admission to day classes in 1954 almost reached high school graduation. Students enrolling in evening classes have remained a very heterogeneous group, varying in educational attainment from near illiteracy to post-graduate scholarship at universities.¹²⁸ Conversely, the average age of students has declined from just over 21 years in 1929 to an estimated 19 or 20 years at present.¹²⁹

In Institute day classes, the proportion of students from Calgary has in recent years remained approximately the same. Similarly, the majority of students have been from Alberta, although considerable numbers have come from other Canadian provinces and territories and from points overseas, as shown in Table XXIV, page 313. Of the 706 graduates in 1961, 249 were from homes north of Red Deer; 264 from homes south of this city. The great majority of students have continued to be of the male sex.

¹²⁸ Alberta, Department of Education, Annual Report, op. cit., 1951, page 91.

¹²⁹ Letter from Mr. D.C. Fleming, loc. cit.

TABLE XXIV

HOMES OF STUDENTS ENROLLED IN DAY CLASSES 1956-1959
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

Homes	1956-57	1957-58	1958-59
Calgary	235	255	376
Other Alberta Points	500	579	685
Other Canadian Locations	109	166	173
Foreign Countries	2	6	5
Totals	846	1006	1239

Certificates and Diplomas

Lists of diplomas and certificates issued since 1941 show that the requirement for a diploma was raised from successful completion of a "regular" day course to the same completion of at least a two-year program. Certificates after this date were issued for courses of one year's duration or less. Table XXV, page 314 lists diplomas and certificates issued by the Institute in the years 1946 and 1961.

As seen in Table XXV the largest increase in the number of courses successfully completed occurred in the Institute's diploma-course department. Keeping in mind that diploma courses in 1960 were of two years' duration (with the exception of the three-year aeronautics course), and the addition of merchandising administration in 1960,

it is seen that the maximum number of diplomas issuable at the end of the 1960-61 term was less than half of the total enrolment in diploma courses. Great improvement is evident, therefore, in the retention and graduation of diploma-course students since 1925, when only one regular-course student out of 28 carried his course through to successful completion. The drop-out rate in the Institute's day classes in the period 1956-61 was approximately 6 percent.¹³⁰

TABLE XXV¹³¹

DIPLOMAS AND CERTIFICATES ISSUED IN THE YEARS 1946 AND 1961
PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART

	1945-46			1960-61		
	Enrol.	Dip. and Cert.	% of Enrol.	Enrol.	Dip. and Cert.	% of Enrol.
Diplomas	309	33	11%	1150	360	31%
*Day Class Certificates	116	84	72%	164	135	83%
**Evening Class Certificates	308	116	37%	2070	817	39%
Correspondence Class Certificates	395	40	10%	1402	235	17%
Totals	1128	273	24%	4786	1547	33%

* Figures do not include welding students.

** These figures do not include dressmaking students, who were not eligible for certificates.

¹³⁰ Calculated from figures taken from the Institute's office records.

¹³¹ Figures used were taken from Annual Announcements of the Institute, Commencement brochures, and Annual Reports of the Department of Education.

Diploma requirements, apart from the lengthening of the courses for which diplomas are issued, have changed little since 1920. A student currently enrolled in a diploma course must have an attendance of 90 percent and score a mark of at least 60 percent on each unit of his course. Further, he must meet prescribed requirements in home study. Honors diplomas were first issued in the spring of 1960. Requirements for these diplomas include an average mark of 80 percent in each year of a course with not less than a mark of 70 percent in any subject. Twenty-five honors diplomas were awarded in 1961.

Scholarships and Awards

Previous to the early postwar period the only scholarships available at the Institute were those presented by various organizations and firms to winning students in the art department.¹³² During 1948-49 a beginning was made in the awarding of scholarships to students in courses other than art. The scholarships presented during this term were as follows:¹³³

Bruce Robinson Electric Ltd., Calgary--\$150 to the best all-round student in the first year of his course in Industrial Electricity.

¹³² Alberta, Department of Education, Annual Report, op. cit., 1949, page 60.

¹³³ Ibid.

Canadian Western Natural Gas Co. Ltd.--\$150 scholarships, one to the best all-round student in Machine Shop; the other to the best all-round student in Survey Drafting.

Manning Egleston Lumber Co. Ltd., and Crown Lumber Co. Ltd.--\$50 scholarship to a selected student in Building Construction and Drafting.

The Alberta Command of the Canadian Legion, B.E.S.L.--\$100 scholarship for the best all-round student in any department.

By 1954, additional scholarships amounting to \$1,575 were made available to departments other than the art department by the Provincial Department of Economic Affairs, Calgary Power Ltd., Calgary Motor Products, Ltd., Freeman Wilson Ltd., General Supplies, Ltd., Maclin Motors, Ltd., Alberta Wheat Pool, Alberta Wholesale Implement Association, Revelstoke Sawmill Co., Ltd., and R.C.A. Victor Co., Ltd.¹³⁴ The total value of scholarships and other awards presented during the Institute's first¹³⁵ Awards Day Program in 1954 was \$2,450.

For the first time since the beginning of apprentice training at the Institute, outstanding apprentices were recognized in the Institute's Awards Day exercises in November, 1958. Fifteen apprentices received recognition

134

Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1949-54 passim.

135

Mr. W.A.B. Saunders, Vice-Principal, Southern Alberta Institute of Technology, program notes, Awards Day, November 1, 1961.

from representatives of various organizations.

The growing interest of industrial and other organizations in the Institute's work is reflected by the continually increasing value of scholarships and bursaries presented by them to students at the Institute. By 1961 the value of these presentations had risen to \$15,415.¹³⁶

The Students Assistance Act, 1959

Augmenting the financial support of students through scholarships and bursaries since 1959 has been the assistance made available by the Provincial Government through the Students Assistance Act, assented to on April 7, 1959. The Act was an enlargement of its predecessor by the same name passed in 1953, which authorized assistance for university students and student nurses only.¹³⁷

The revised Act of 1959 authorized several other types of assistance, including loans to students at the Institute of Technology and Art. In addition, the Act provided funds, designated as The Queen Elizabeth Education Scholarship Fund, for disbursement as scholarships, grants and bursaries.¹³⁸

¹³⁶ Ibid.

¹³⁷ Alberta, Department of Education, Annual Report, op. cit., 1955, page 100.

¹³⁸ Ibid., 1959, page 117.

The new Act provided loans up to \$750 in any school year for students enrolled at the Institute. Loans extended under the Act to 180 Institute students in 1960-61 amounted to \$79,194.¹³⁹ An additional \$3200 in prizes was presented to students at the Institute during the same term through The Queen Elizabeth Scholarship Fund.

Assistance for Apprentices

Assistance for apprentices receiving training at the Institute was provided under terms of the Dominion-Provincial Apprenticeship Agreement. An allowance of \$12 weekly for single men and \$15 weekly for married men was set, payable by the Provincial Government to apprentices while in attendance at the Institute. The Province also undertook to pay for the return transportation of every apprentice to Calgary. Many employers have been supplementing Provincial allowances by 50 to 100 percent.¹⁴⁰

Early in 1960 apprentices were given further assistance through being permitted by the Federal Government to draw unemployment benefits for the period of their training at the Institute.¹⁴¹ Ruled by the National Employment

¹³⁹ Ibid., 1961, page 94.

¹⁴⁰ A Modern Concept of Apprenticeship, op. cit., page 15.

¹⁴¹ North Hill News, Calgary, March 24, 1960.

Commission as officially unemployed while training at the Institute, apprentices have since received from the federal and provincial governments subsistence amounting to at least ¹⁴² \$100 per month.

Placement

It has already been seen that in postwar years industry's demand for graduates of the Institute has greatly exceeded the Institute's output of technicians. Notwithstanding a decrease in industry's need for technicians during the economic recession in 1957, the Institute was ¹⁴³ still unable to fill the demand.

Described as "reasonably good," employment prospects for graduates of the Institute in 1961 may have been the ¹⁴⁴ least encouraging since World War II. Since then, however, the demands for Institute graduates have evidently improved, as job prospects for them were recently stated to be "bright." ¹⁴⁵ Prospects for summer employment, notwithstanding, were reported, as in the previous year, to be far ¹⁴⁶ from encouraging.

142

Ibid.

143

Alberta, Department of Education, Annual Report, op. cit., 1958, page 95.

144

The Calgary Herald, February 23, 1961

145

The Albertan, May 25, 1962.

146

Ibid.

Another indication of the general worsening of employment opportunities was the resumption of free classes for the unemployed in the fall of 1960 for the first time since the Economic Depression. Day classes in English, mathematics and science; and evening classes in automotives, electricity, and drafting were offered to a class of 72 unemployed men between the ages of 16 and 46 years.¹⁴⁷ Costs of instruction were shared by the federal and provincial governments.

To meet the need for an effective placement service for students¹⁴⁸ of the Institute, the Calgary Office of the National Employment Service established a branch employment office at the Institute in 1955. All students at the Institute have been given the opportunity to register with the National Employment Service here as part of their enrolment procedure on registration day. Functions of the Service's representative at the Institute have included the arranging of employer-student interviews, and the placing of students¹⁴⁹ in part-time, summer, and permanent employment.

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The South Side Mirror, Calgary, March 1, 1961.

¹⁴⁸

Southern Alberta Institute of Technology, Annual Announcement, 1962-63, page 20.

¹⁴⁹

Alberta, Department of Education, Annual Report, op. cit., 1956, page 91.

Extracurricular Activities

The mushrooming of extracurricular activities since the War placed an increased demand on gymnasium facilities at the Institute, facilities which were used jointly by three educational institutions: the Institute of Technology and Art, the University of Alberta, Calgary Branch, and the University Demonstration School.¹⁵⁰ The consequent cramping and curtailment of each institution's athletic activities resulted in the necessity to rent gymnasias in the city from time to time, and in a plea from the Institute for due consideration by the Province to the need for additional gymnasium facilities.

For several years following the passing of World War II veterans from the Institute, interest and participation of students in extracurricular activities declined, as the maturity and vitality of the student body during the veterans' presence seemed to vanish.¹⁵¹ Although the scope of activities remained broad, many students failed to avail themselves of the opportunities for personal development in them.¹⁵²

¹⁵⁰ Alberta, Department of Education, Annual Report, op. cit., 1950, page 73.

¹⁵¹ Ibid., 1955, page 91.

¹⁵² Ibid., 1953, page 82.

Attributed to the ability and energy of the Students' Association's officers, a resurgence of interest in extra-curricular activities occurred during the 1954-55 term, when the Institute's full range of activities "operated at a high level of interest and with a great deal of success."¹⁵³

The term was marked also by two major innovations--the Awards Day ceremony on the first Wednesday in November, and Closing Exercises held on a trial basis in the auditorium on the second Friday in May. On the latter occasion presentations to students included athletic trophies, and major and minor "T" awards recognizing meritorious work in any extracurricular activity.

In accordance with a revision in the Association's constitution in 1929, each term prior to the 1955-56 term was divided into three executive periods in order to give more students experience in election procedures and in holding office. A disadvantage of this system was that in each term no activities were organized until a new executive had been elected.¹⁵⁴

In 1955 the executive year was once again divided into two periods--November to March, and April to October. In each school year the executive for the latter period has consisted of students who planned to return to the Institute

¹⁵³ Ibid., 1955, pp. 90-91.

¹⁵⁴ Ibid., 1956, page 96.

in the following fall. Thus was achieved an improved continuity in the executive of the Students' Association, and an immediate organization of extracurricular activities at the beginning of each school term.¹⁵⁵

Coincident with the growing emphasis at the Institute on the training of technicians was the organization of students' departmental clubs--the Aero Club, the Survey Club, the Laboratory Technicians Club, to name only a few. By 1957 the most outstanding feature of the extracurricular program was the activities of the departmental clubs, whose members met regularly for organized lectures, study and group discussions, and social purposes.¹⁵⁶ The usual activities including the annual banquet were conducted successfully, although inadequate gymnasium facilities still necessitated the renting of gymnasia elsewhere.

Improvement in the programing and organizing of extracurricular activities followed the appointment of Mr. Allan J. Buttle, Coordinator of Students' Activities in 1953.¹⁵⁷ Mr. Buttle estimated that during the 1960-61 term 95 percent of the Institute's regular day students participated in at least one extracurricular activity.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid., 1957, page 98.

¹⁵⁷ Ibid., 1959, page 109.

X. PUBLIC RELATIONS

With the redecoration and modernization of the permanent plant of the Institute in the early postwar period, the school became a "show-place," as an increasing number of visitors were being attracted to it.¹⁵⁸

Through an invitation from the Minister of Education, some 160 members of the Alberta School Trustees Association toured the Institute in the evening of November 12, 1946. As previously arranged for the occasion, classes in all departments were in operation.

Other visitors included Ministers of the Crown, Deputy Ministers, officials from centers across Canada and numerous parties from rural areas. The increasing interest of the general public in the Institute created a favorable impression there¹⁵⁹ and doubtlessly gave impetus to the establishment of the Institute's publicity program.

During the 1948-49 term the Institute held "Open House" on six occasions for members of service clubs, home and school associations, and groups of employers. In groups of five to seven persons, the guests were conducted through shops, laboratories and classrooms, where evening or volunteer day students were normally proceeding with their work. The

¹⁵⁸ Alberta, Department of Education, Annual Report, op. cit., 1947, page 87.

¹⁵⁹ Ibid.

reaction of the visitors was in every instance "one of amazement at the size of the place, the adequacy of the equipment, the vital nature of the instruction, and the enthusiastic interest of the students."¹⁶⁰

In the spring of 1949 the Institute published a brochure to inform high school students of the courses offered at the Institute. Entitled "After High School Days, What of the Future?" the brochure gave a brief account of the work and life of the Institute and indications, as well, of the types of employment available for Institute graduates. Copies of the pamphlet were mailed to every high school in Alberta.

In another phase of the Institute's publicity program during the 1948-49 term, members of the staff presented talks on the work of the Institute at teachers' conventions at Coronation, Hanna, Lethbridge and Calgary, primarily for the assistance of high school teachers engaged in guidance work.¹⁶¹

The Institute's public relations program in the following year included continuing favorable publicity through newspapers in Calgary and elsewhere in the Province, and

¹⁶⁰ Ibid.

¹⁶¹ Ibid.

through various trade publications.¹⁶²

Open House was held on five occasions during the term at the request of interested groups which included service clubs and trade organizations. Addresses were delivered by Mr. Fowler and other members of the Institute staff to service clubs, high school graduation exercises, trade organizations, panels, and to teachers at a convention of the Alberta Teachers' Association.¹⁶³ The dressmaking and art departments maintained their contacts with the general public through the medium of two fashion shows and an art exhibition.

The work of publicizing the Institute was extended in 1952 by a comprehensive program of publicity conducted by the Publicity Branch of the Provincial Department of Economic Affairs through newspapers, magazines and posters.

In the next year, when the number of apprentices receiving instruction at the Institute outnumbered regular day students almost three to one, it was decided to launch a vigorous and extensive publicity campaign.¹⁶⁴ The purpose of the campaign was to acquaint Alberta's increasing high school population with the employment opportunities available through the training provided by the Institute. It

¹⁶² Ibid., 1950, page 71.

¹⁶³ Ibid.

¹⁶⁴ Ibid., 1953, page 31.

was planned also to continue the campaign for many years because of the "continually changing population in the high schools."¹⁶⁵

The expanded public relations program included the appointment of a public relations officer, Mr. John Platt, who was also the head of the department of correspondence instruction. Open House was conducted on the evenings of the second Wednesday and Thursday in February. Encouraged by an attendance of some 4,000 visitors, the Institute's administrators planned to make Open House an annual event and to extend the time from two to four evenings.

Bulletins concerning Institute courses were mailed to every high school in the Province. Through the cooperation of the Department of Education's Director of Guidance, representatives from the Institute addressed high school students in "Career Days" events in Alix, Barrhead, Magrath, Raymond, Lethbridge, Cardston, Champion, Claresholm, High River, Oyen, Strathmore, and at the composite high schools in Calgary.¹⁶⁶

An addition to the publicity program were addresses by Institute staff members to Home and School and A.T.A. groups in Lethbridge, Stettler, High River, and Calgary.

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

A further expansion of the program was the enabling of visits to the Institute by groups of students from Cluny, Drumheller, and Lethbridge. New also was the utilization of radio through the courtesy of radio stations CFCN and CFAC and of the Hudson's Bay Company.

A larger program in 1954 included lectures given to senior students from 78 Alberta high schools. Nineteen leaflets were mailed during the 1954-55 term to each of 400 high schools in the Province. In addition to addresses to service clubs and labour groups was a talk delivered at the joint annual banquet of the Association of Professional Engineers of Alberta, the Edmonton branches of the Engineering Institute of Canada, the Canadian Institute of Mining and Metallurgy, and the Chemical Institute of Canada.

Events rich in publicity for the Institute were the flights, some of which were televised in Eastern Canada, of a replica of a 1909 Bleriot aircraft built at the Institute in 1953. A climactic flight of the aircraft was made over the English Channel on July 31, 1955.

Displays of student work were shown in high schools, the Stampede Corral, and the Hudson's Bay Store in Calgary. Examples of work of advanced students in ceramics, machine shop and drafting were sent to Geneva, Switzerland to be

exhibited there by the International Bureau of Education.¹⁶⁷

The Institute has since added film and television to its advertising media, but perhaps the most notable observation regarding recent expansion of the public relations program is that during Open House in March, 1962 approximately 13,000 visitors were conducted through the Institute's numerous departments.¹⁶⁸

XI. EXPANSION OF THE PHYSICAL PLANT

As was the case in the latter 1920's, the provision of accommodation since World War II has consistently fallen short of the need for it.

Postwar expansion of accommodation occurred in 1946 when the Institute fell heir to one of the twenty-six temporary buildings built by the R.C.A.F. on the Institute site during World War II. The building, formerly a mess hall, provided much needed space for the growing building construction and drafting department. During the same year a second machine shop was equipped to relieve a serious situation involving both accommodation and equipment.¹⁶⁹ In the following year the former R.C.A.F. drill hall was

¹⁶⁷ *Ibid.*, 1954, page 91.

¹⁶⁸ *Ibid.*, 1961, page 107.

¹⁶⁹ *Ibid.*, 1946, page 86.

acquired for use by the aeronautics department.

Following further acquisitions of temporary buildings, the Institute's campus in 1953 consisted of nine buildings. In addition to the main building and power plant, a separate structure housed each of the following departments: "A" workshops, "B" workshops, aeronautics, commercial wireless, refrigeration and drafting, crafts and sheet metal, storage, recreation and lunch bar.¹⁷⁰

The shortage of space, however, remained acute. A new one-storey 80' x 125' science wing located between the main building and the "A" shop building was completed in the fall of 1955. In the following year plans were completed for the erection of a three-storey building, named the East Block, to provide accommodation for the departments of art, drafting, food service training, radio and electronics. The building was also to provide much needed space for various student activities. Consideration was given at this time to the preparation of a master plan for the campus.¹⁷¹

During the 1956-57 term funds were approved for the erection of the East Block, an addition to the "A" building to provide office space for instructors, and an

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Provincial Institute of Technology and Art, Annual Announcement, op. cit., 1953-54, page 5.

171

Alberta, Department of Education, Annual Report, op. cit., 1956, page 91.

extension to the "B" building to provide additional departments. Federal assistance amounting to one-half of costs was to be provided under the Vocational and Technical Training Agreement Number 2, successor to the ten-year Vocational Schools' Assistance Agreement passed in 1945.

Costs of construction of these buildings during the fiscal year 1957-58 were as follows:¹⁷²

	Total Costs 1957-58	Federal Reimbursement Claimed
East Block	\$1,727,181.09	\$862,127.20
Extension to "A" Building	39,790.11	19,749.15
Extension to "B" Building	59,942.46	29,945.38
	<u>\$1,826,913.66</u>	<u>\$911,821.73</u>

Completed in 1958 at a cost of \$3,000,000, including equipment valued at \$500,000,¹⁷³ the East Block provided accommodation for a 10 percent increase in enrolment.¹⁷⁴

At the end of the year 1959 the Institute's plant, valued at \$10,000,000, contained a floor area of 364,400 square feet.¹⁷⁵ Yet accommodation remained inadequate for

¹⁷² Ibid., 1958, page 102.

¹⁷³ The Calgary Herald, November 14, 1958.

¹⁷⁴ News Bureau Memo, CFCN Radio, Calgary, September 4, 1958.

¹⁷⁵ The Albertan, December 31, 1959.

the increasing enrolments. Further plans to expand the Institute's facilities included the removal of all temporary buildings from the campus within two years to make room for new construction, and the occupation of the portion of the main building used by the University of Alberta, Calgary on completion of the University's new campus in the following year. Plans were made also to landscape the southern portion of the 123 acre campus and to provide additional parking areas for student motorists.

In view of the continuous inadequacy of the Institute's technician-training facilities, plans to increase them had already gone beyond the Institute itself.

As enrolments in technician courses have increased at a greater rate since 1953 than those in apprentice classes (Table XVIII), the trend in the Institute's work was considered to be moving away from the training of tradesmen.¹⁷⁶ Consequently, it was expected that a trades training school would soon be established in Edmonton.¹⁷⁷

The Edmonton center, presently under construction, was originally named the Provincial Vocational School. Since it was decided by the Department of Education to train

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The North Hill News, December 19, 1957.

177

Ibid.

not only tradesmen but technicians at the center, its name was changed in December, 1960 to the Northern Alberta Institute of Technology.

At the same time, the name of the Provincial Institute of Technology and Art was changed to the Southern Alberta Institute of Technology.¹⁷⁸

With the opening of the Edmonton center, apprenticeship training at the Institute in Calgary is not expected to increase appreciably in the next ten years.¹⁷⁹ Nevertheless, expansion at the Institute continues. Construction of the \$500,000 "D" building, providing accommodation for the diesel, welding and power plant engineering departments, was completed in the fall of 1961. Equipment for the building cost an additional \$150,000. Presently under construction is a gymnasium building, estimated to cost \$600,000, less equipment.

Continued expansion is expected in view of Mr. Wood's prediction that by 1970 the Institute will graduate 1,000 junior engineers and technicians, three times the total annual enrolment in the engineering technician and technician divisions in the 1959-60 term.¹⁸⁰

¹⁷⁸ The Albertan, December 28, 1960.

¹⁷⁹ Ibid., December 31, 1959.

¹⁸⁰ Ibid.

CHAPTER X

SUMMARY AND CONCLUSIONS

For long a concern primarily of private enterprise, the provision of vocational education in Canada was considered early in the twentieth century inadequate towards meeting the needs of the nation's budding industries.

In response to this inadequacy, the Dominion Government, through its appointment of the Royal Commission on Technical Education in 1910, performed its first major act in the field of vocational education.

The Government's first Act to provide assistance for vocational training - the 1913 Agricultural Assistance Act - was almost a complete failure. Reasons for the failure undoubtedly include those which relate to the control of education as prescribed by the British North America Act. Not all provinces welcomed the Royal Commission. The Dominion Government was unsure of its course, as shown by its provision of funds under the Act with "no strings" attached. Similarly, as the Act contained nothing specific as to what types of projects could be carried out under it, some provinces found it difficult to put the Dominion funds to worthwhile use. This was a wobbly beginning in Dominion - Provincial cooperation in vocational education, but an

important one, as it provided a basis for future development.

In Alberta, the Agricultural Assistance Act accounted for the establishment of a number of agricultural schools and in some measure, no doubt, for the appointment of a Provincial director of technical education in 1914.

How much influence the Royal Commission on Technical Education and the Agricultural Assistance Act had on the Commissioners appointed to investigate the Calgary College problem is a matter for conjecture. It appears correct to conclude, however, that this Commission recommended an institute of technology and art for Calgary in view of the Dominion's entry into vocational education, of the Provincial Government's legislation barring the establishment of a second university in Alberta, of the clamouring by Calgarians for a university in their city notwithstanding, and of local desires for the provision of vocational education in Calgary.

Efforts of the governors of Calgary College to provide university education in Calgary did not end with the Commission's discovery that the College had become bankrupt. The governors vigorously attempted to effect a reincarnation of Calgary College in the proposed institute of technology and art. It is difficult to imagine the governors demanding the right to appoint four of the nine directors

for the proposed institute on the basis of the "million dollars" of donations held by them, when at the same time they were bankrupt and therefore had virtually nothing to offer financially towards the construction and maintenance of the school.

At long length City Council removed the governors from further negotiations concerning the Institute, leaving the question of its establishment in the hands of public authorities, Provincial and municipal.

In subsequent negotiations the Calgary School Board seemed relegated to a less conspicuous role, and the fight for the technical school's establishment was carried on by the Provincial Government and City Council with the same result -- no agreement.

Agreement came suddenly early in 1916 when the Dominion Government entered the scene. Vocational training facilities were needed by returning disabled soldiers. Work on the establishment of the institute was begun at once.

As expected, the primary function of the Institute was the retraining of war veterans, a function which in 1918 was taken over completely by the Dominion Government. As veterans were enrolling at the Institute in increased

numbers, the Institute's service to nonveterans was progressively curtailed, much to the displeasure of the local citizenry.

It is interesting to surmise what would have happened to the Institute in 1920 when it was returned to the Province, if in the previous year the Dominion Government had not passed the enabling Technical Education Act, which, over a ten-year period, appropriated \$10,000,000 to the provinces for the provision of vocational education.

Unlike its 1913 predecessor, an important condition was attached to this Act. To qualify for assistance under the Act, the provinces were required to match Dominion expenditures, a requirement which was incorporated in almost every subsequent Dominion-Provincial vocational assistance agreement to date. The training of veterans of World War II at Dominion expense was an exception.

An important consequence of the Act was, for the Institute, the severance of municipal participation in its control and support.

In continued disregard for the Provincial Government's stand with respect to the Institute's curriculum, however, and the obvious implications of Federal support for the Institute, certain Calgary citizens continued until 1923 to press their demands that the Institute offer university

courses. The demands were rejected.

In its first nine years under Provincial control, (1920-1929), the Institute made an impressive beginning. The enrolment in day classes rose from 165 in 1920 to 861 in 1929, with overcrowding as a chronic concomitant. Evening classes, too, were marked with similar success, as the enrolments in them increased from 227 in 1920 to 916 in 1929. Other outstanding achievements attending the Institute's eagerness to extend and improve its services were the establishment of local advisory boards and the in-service teacher training program. It would seem that the Institute's prestige in the latter 1920's was higher than at any other time in the school's first thirty years of operation.

Following the inflationary years of the 1920's the beginning of the Economic Depression in 1930 ushered in nearly a decade of a much reduced service at the Institute, as financial support for vocational education from the Dominion Government came to an end. The Technical Education Act of 1919 had expired, and its successor, the Federal Vocational Education Act of 1931 was stillborn. Support from the Provincial Government was reduced to an uncertain trickle.

Cancellation of courses became the order of the day. A pathetic addition to the shrinking day curriculum, however,

was a three-week course in placer mining, the object of which was to enable hard pressed members of Canadian society to dig for gold. Enrolment in day classes fell to a low of 542 in the 1934-35 term. This enrolment included 111 welding students whose course was only of three weeks' duration. Evening classes were almost completely abolished. With a small enrolment annually, art was the only evening course continued through the Depression. Free evening classes were given the unemployed, however, by volunteer instructors, unpaid for this extra service.

As the nation emerged slowly from the worst years of the Depression, vocational education was stimulated by the Agricultural and Unemployment Relief Act and its successor, the Dominion-Provincial Youth Training Act of 1939. The Program was carried out under the authority of these Acts and the subsequent Dominion-Provincial Agreements, all of which called for an equal sharing of costs by the two governments.

The Institute of Technology and Art was affected by the Program chiefly in the aeronautics department, which offered courses arranged by the Royal Canadian Air Force. With Canada's entry into World War II, the work of the Youth Training Program was conveniently redirected to meet the needs of the nation's mushrooming Wartime Emergency Training Program. Accordingly, the former Program's

aeronautical course at the Institute became War Emergency Training.

Forced to vacate its home in 1940 by needs of the British Commonwealth Air Training Plan, the Institute found new quarters in the grandstand building at the exhibition grounds and at the spacious Coste House. Although War Emergency Training classes swelled the overall enrolment, the number of students registered in regular Institute courses in 1940 was only 295.

In some important aspects of the Institute's operations, the War aggravated and extended the undesirable conditions which developed during the Depression. Some of the Institute's equipment was badly in need of replacement in 1939. At the War's end much of the equipment in every department was not only obsolete but unserviceable as far as turning out first class work on them was concerned. The absence of significant improvement in the curriculum and in instruction during the Depression years was worsened during the War by the trimming of instruction to the bare essentials as required by the War Emergency Training Program. Staff and student morale was severely tested by the poor working conditions in the noisy and cramped makeshift plywood shops of the Institute's wartime quarters, and by the almost complete absence of facilities for social and other

extracurricular activities.

For almost fifteen years the Institute's efforts to provide the type of service worthy of its name had been thwarted by two national emergencies. Its prestige had declined seriously and rumors in the latter part of War predicted an early end to the Institute's existence.

An illustration of the principle that history repeats itself is present in the Federal Government's response to the postwar need for increased provision of vocational education. The Dominion responded to this need after World War I with the passing of the Technical Education Act in 1919. Again as the Second World War entered its final year, the Federal Government came to the assistance of vocational education. Aid was extended through various Federal-Provincial agreements including the Apprenticeship Agreement in 1944, and the Vocational Schools' Assistance Agreement in the following year, all authorized by the sweeping terms of the Vocational Training Coordination Act of 1942.

The basis of Federal aid to vocational education was now firmly established--that the provinces match Federal appropriations, and that training provided under the agreements consist of no less than one-half of instructional time in shopwork, and no more than one-half of this time in classroom work in related subjects.

Canada's rapidly developing postwar industries widened the field of skilled labour. A demand arose for workers with skills lying between those of the tradesman and those of the professional engineer. In Canada the skills in this in-between field came to be known as the technologies, and the workers possessing these skills were identified as technicians. More recently a worker of another rank appeared--the engineering-technician, or as the name implies, the worker whose skills lie between those of the technician and those of the professional engineer.

These developments in the industrial field, combined with other factors, focused the Institute's attention on the training of technicians.

Among other factors was the consistent inability of the Institute to accommodate all applicants for training. Another was the Institute's inability to meet industry's demands for graduates in technician courses. Important also was the fact that the average educational attainment of applicants for courses at the Institute had reached ten grades of public school education.

Beginning significantly in the early postwar period, the task of upgrading the Institute's courses and establishing educational prerequisites to them was gradually carried forward.

Acceleration in this work occurred in 1953 when the enrolment of apprentices receiving training at the Institute reached its peak, in proportion to students enrolled in Institute courses. Evidence shows that at this time the Institute became much more attentive and dedicated to the aim of training technicians--the foremen and superintendents in industry. Technician-level courses were appropriately renamed. The Institute's program of publicity was greatly enlarged.

In response to demands from industry, increased attention was turned to mathematics, science, and English. An entrance examination in mathematics was set in 1955 for all applicants for first-year courses. To this examination was added another in science in 1958. On requests from advisory committees, greater emphasis has, since 1959, been placed on the teaching of English, particularly in composition and in technical report writing.

The introduction of educational prerequisites established a closer relationship between the Institute and Alberta's senior high schools. A result of this has been the considerable clouding of an early Dominion stipulation that the Institute qualified for Federal support only as long as no prerequisites for admission to its courses were laid down. The dividing line between "vocational" and

"academic" education had thus become blurred. Are calculus, English, physics and chemistry of "vocational" or "general" educational value? It is quite evident that as technological fields develop and widen, more so-called academic or general education is required for the training of skilled workers. Also evident in recent years has been the increasing Federal-provincial cooperation in education, as evidenced in the establishment of vocational high schools throughout the nation. Perhaps the changing semantics regarding "general" and "vocational" education account for the growing cooperation in education between the two levels of government.

In the everwidening field of vocational education in Canada, the Institute's future role is becoming more clearly evident. As enrolment figures show, the school is being increasingly more concerned with the training of technicians and junior engineers.

The Institute's technician-training function is not, however, assured. In the absence of a more diversified system of vocational education in Alberta, the Institute, since its establishment has been in this educational field a "catchbarrel," repeatedly thwarted from its main purpose by the many and vacillating demands made on its services.

The advent of Federal vocational high schools is an

encouraging development towards an articulated, vocationally orientated program of technical education. Before these schools can contribute substantially to the nation's needs for vocational education, however, decisions have yet to be made regarding their function and relationship to other educational institutions, both academic and vocational. The expenditure by federal and provincial governments of several hundred million dollars on the construction of the vocational high schools is being made in advance of the formulation of a firm policy to govern their operation. This indecision on the part of the Federal Government is reminiscent of a similar lack of Dominion initiative evident in the largely ineffectual Agricultural Assistance Act of 1913.

To what extent is Section 93 of the B.N.A. Act and the growing demands in vocational education for "academic" instruction accountable for the Canadian Government's present absence of policy? To what extent have Canadian industry's needs for vocational education been determined? What types of vocational training institutions are required to provide technical education in Canada most effectively? To what extent have the efforts of leaders in Canadian labor, industry, education, and governments been invited and coordinated towards the establishment of a wider program

of vocational education? These are questions indicative of problems which await satisfactory resolution before the Southern Alberta Institute of Technology can in full measure take its proper place in the field of Canadian vocational education.

As a recommendation for further study, this writer suggests a history of industrial arts education in Alberta. As education in this province is evidently on the threshold of another major change, the study would be particularly timely.

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G. PERSONAL INTERVIEWS

Mr. D.C. Fleming, Director of Instruction, Southern Alberta Institute of Technology, Calgary, Alberta.

Mr. D.A. Gaudette, Instructor, Mathematics-Physics Department, Southern Alberta Institute of Technology, Calgary, Alberta.

Mr. Bruce Henry, Supervisor, Provincial Apprenticeship Board, Lethbridge, Alberta.

Mr. Illingworth H. Kerr, Head, Alberta College of Art, Division of the Southern Alberta Institute of Technology, Calgary, Alberta.

Mr. W.J. Iva, Director, Vocational Division, Lethbridge Junior College, Lethbridge, Alberta.

Mr. E.W. Wood, Principal, Southern Alberta Institute of Technology, Calgary, Alberta.

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